

**PHOTOGRAPHIC INTERPRETATION REPORT**



**SOUTHEAST ASIA  
ACTIVITY REPORT**

**ELECTRIC POWER FACILITIES,  
NORTH VIETNAM**

R-146/67  
OCTOBER 1967

WARNING

This document contains information affecting the national defense of the United States, within the meaning of Title 18, sections 793 and 794, of the U.S. Code, as amended. Its transmission or revelation of its contents to or receipt by an unauthorized person is prohibited by law.



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~~S/NOFORN~~

Oct 1967



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## INTRODUCTION

This report is a photographic study of the electric power facilities, power grid, and other related hydraulic facilities of North Vietnam. It is not necessarily all inclusive, since it includes only installations identified on aerial photography. Periodic supplements to this publication will be disseminated as new facilities are identified or as better photography becomes available.

This report is divided into six sections:

SECTION A. Thermal Electric Powerplants--those facilities which produce power by utilizing steam-driven turbines.

SECTION B. Hydroelectric Powerplants--those facilities which produce power by utilizing water-driven turbines.

SECTION C. Diesel-Electric Powerplants--those facilities which produce power by utilizing internal combustion engines.

SECTION D. Power Grid System and Major Substations--the distribution system of 110 and 35-kv powerlines and their transforming and switching facilities.

SECTION E. Irrigation/Pumping Stations--hydraulic facilities, some of which bear a close resemblance to hydroelectric powerplants and require good quality photography to properly identify. This section contains a list of approximately 325 such facilities, a small percentage of which may later be identified as power producing facilities.

SECTION F. Miscellaneous--pertinent

items such as photographic examples of minor substations and transportable generators, and line drawings of typical powerline supporting structures.

Included within the first four sections are an introduction, table of contents, and a small scale locator map. A photographic analysis of the referenced photography, a large-scale plot map and a photograph are provided for each item in these sections. The irrigation/pumping stations are plotted on 1:250,000 scale maps with only representative photos included. The miscellaneous section contains a table of contents, selected photography and line drawings.

Installations which do not have a BE reference have been assigned a name utilizing the nearest town as shown on the appropriate map sheet of AMS Series L7014 (1:50,000). Geographic and UTM coordinates for all installations are also derived from Series L7014.

All installations reported are indexed by geographic coordinates in ascending order at the end of the report.

DIA Production Center has reviewed this product and has requested that readers be informed of its concurrence in the photo interpreters' conclusions presented.

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**ADDENDUM**

Three powerplants listed in the Basic Encyclopedia (BE) have been analyzed by NPIC and negated as power producing facilities. The three are as follows:

Ta Sa Hydroelectric Powerplant, Na Ngan at 22-50-50N 106-08-01E [REDACTED] -- 25X1A  
this is an irrigation and flood control dam.

Ta Sa Hydroelectric Powerplant, Tinh Tuc at 22-39-01N 105-51-50E [REDACTED] -- 25X1A  
this is a flood control dam for the mining area. Two sedimentary dams are probably used to prevent silting and blocking of the flood control dam.

Thai Nguyen Thermal Electric Powerplant, Steel Plant at 21-33-19N 105-52-34E [REDACTED] 25X1A  
[REDACTED] -this is a streamplant serving the steel plant. Any existence of generators and other necessary electrical equipment, at this installation cannot be confirmed on photography.

25X1A

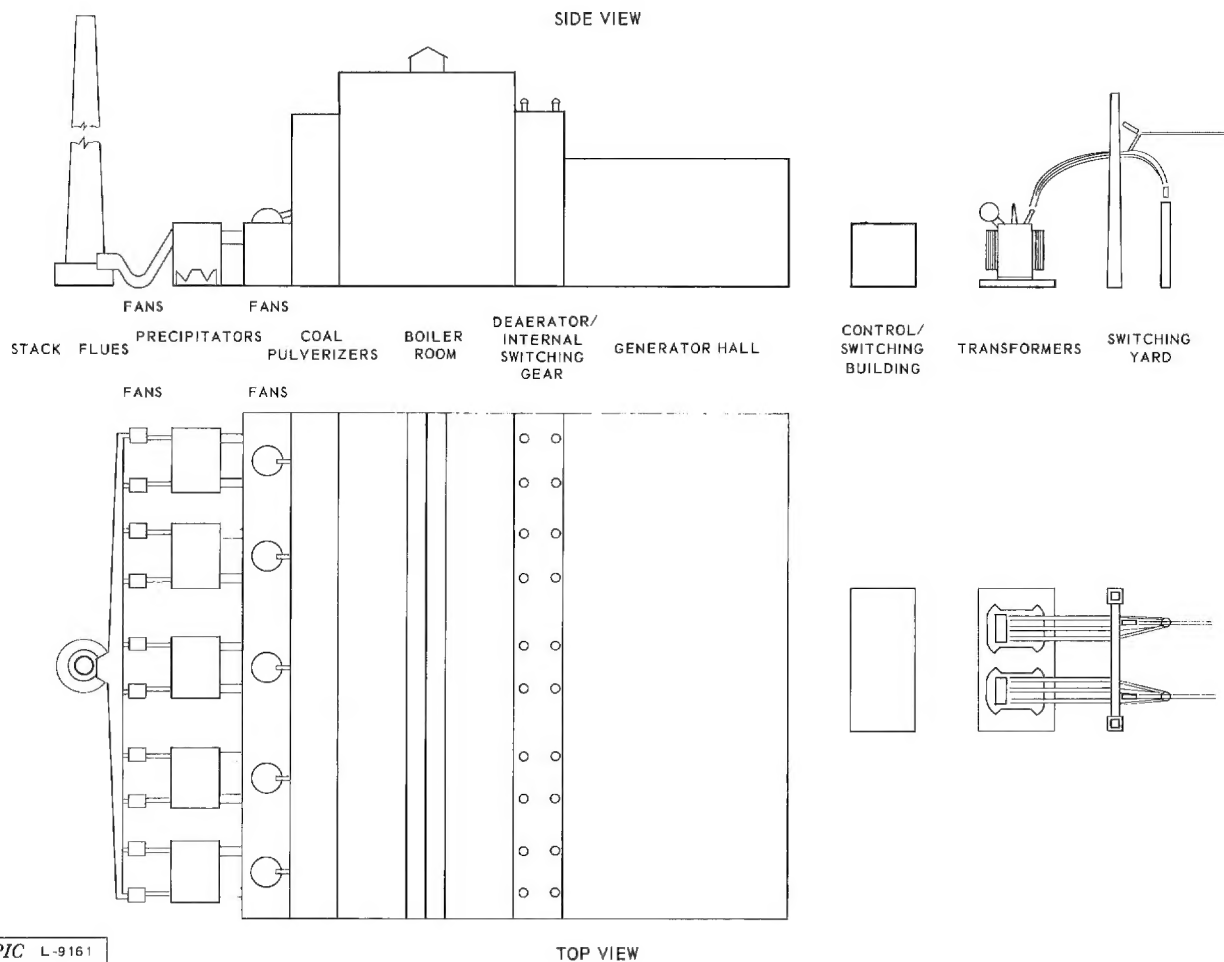
# SECTION A

## THERMAL ELECTRIC POWERPLANTS

## SECTION A Thermal Electric Powerplants

Most of the thermal electric powerplants in North Vietnam have been constructed with the technical and material aid of the USSR, China, Poland, and Hungary.

The basic components are a boilerhouse, a generator hall, a transforming facility, and an exhaust stack or flue. The primary fuel is coal with the most common layout being a basic stack-boiler-generator-transformer on-line design. An innovation to discharge exhaust gases has been observed at Uong Bi, Thanh Hoa, and Ben Thuy powerplants. This method simply extends the flues to one major underground flue, rather than a stock, which terminates in a vent some distance from the powerplant.



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**TABLE OF CONTENTS SECTION A**  
**Thermal Electric Powerplants**

MAP KEY	INSTALLATION NAME	UTM COORDINATES	MAP SHEET	GEOGRAPHIC COORDINATES	PAGE
1	Bac Giang	XJ251559	6251-IV	211808N 1061220E	4
2	Ben Thuy	WF745617	6146-III	183842N 1054224E	6
3	Co Dinh	WG656822	6148-III	194422N 1053751E	8
4	Hai Phong West	XJ738076	6350-IV	205150N 1064020E	10
5	Hai Phong East	XJ783085	6350-IV	205210N 1064250E	12
6	Ha Noi	WJ880270	6151-II	210235N 1055051E	14
7	Hon Gai	YJ201168	6450-IV	205628N 1070705E	16
8	Bo Ha	XJ268740	6251-IV	212757N 1061326E	18
9	Lao Cai	UK947877	5753-I	222931N 1035829E	20
10	Nam Dinh	XH228582	6249-IV	202516N 1061045E	22
11	Dao Cat Ba (Probable)	YH140926	6450-III	204320N 1070325E	24
12	Phu Ly (Possible)	WH959983	6150-I	204704N 1055518E	26
13	Thai Nguyen	WJ847897	6152-II	213645N 1054908E	28
14	Thanh Hoa	WG828932	6148-I	195003N 1054728E	30
15	Uong Bi	XJ861271	6351-II	210210N 1064728E	32
16	Viet Tri	WJ440550	6051-I	211800N 1052520E	34
17	Phu Tho (Possible)	WJ104757	6051-IV	212905N 1050600E	36

**SECRET**

25X1C

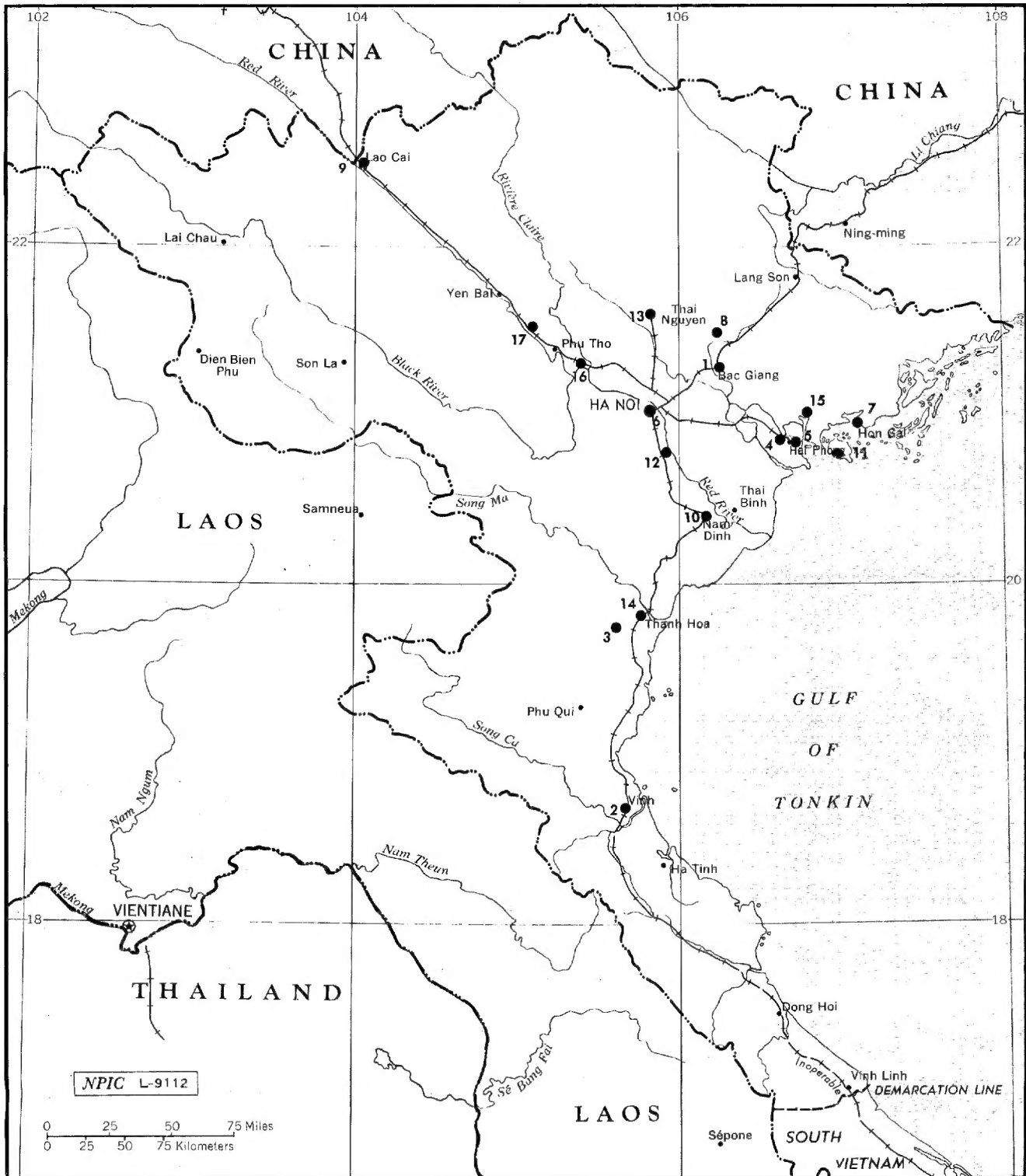
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R-146/67

### THERMAL ELECTRIC POWERPLANTS



SECRET

25X1C

SECRET

25X1C

R-146/67

25X1A

BE NUMBER

XJ251559  
UTM COORDINATES

21-18-08N 106-12-20E  
GEOGRAPHIC COORDINATES

NAME: BAC GIANG THERMAL ELECTRIC POWERPLANT

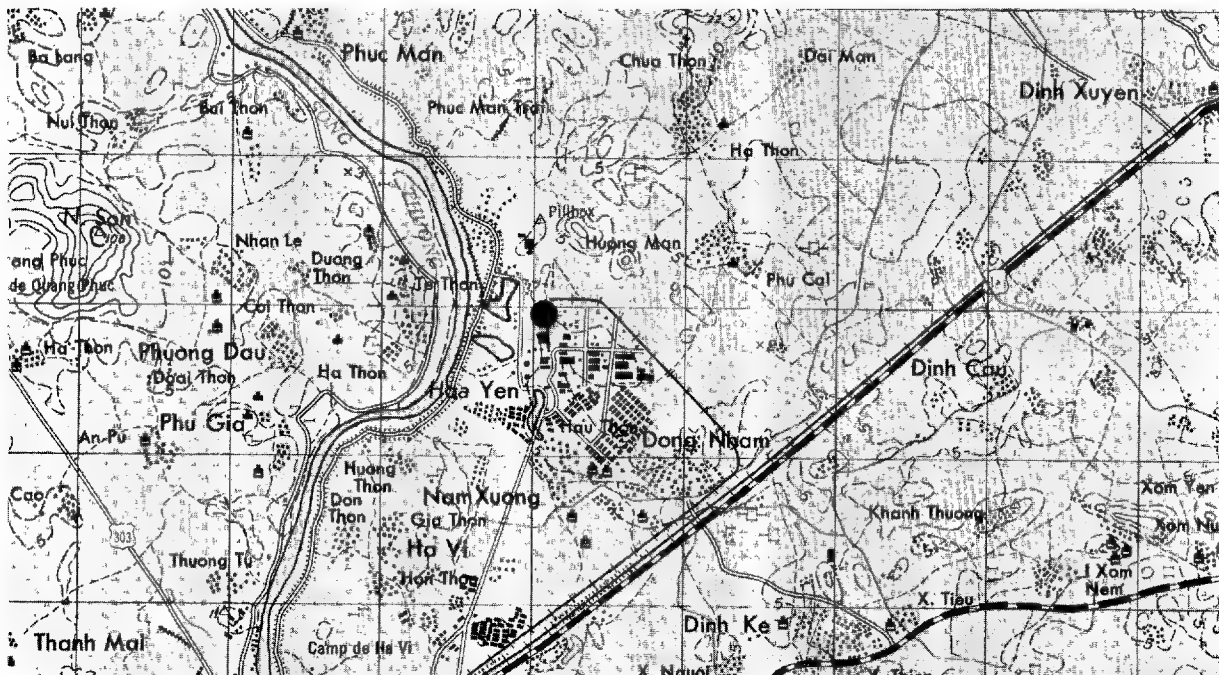
LOCATION: 1.6 NM NORTH OF BAC GIANG (PHU LANG THUONG)

DESCRIPTION: THE POWERPLANT CONSISTS OF A BOILERHOUSE, A GENERATOR HALL, A CONTROL/SWITCHING BUILDING, AND COVERED TRANSFORMERS. ALL COMPONENTS APPEAR TO HAVE SUSTAINED AT LEAST SUPERFICIAL DAMAGE. THE 2 SWITCHING YARDS AT THE PLANT HAVE SUSTAINED STRUCTURAL DAMAGE.

25X1D

PHOTO REFERENCES:

MAP REFERENCES: AMS SERIES L7014, SHEET 6251-IV, 1ST ED, 1965 (U)  
AMS SERIES JOG(G) 1501, SHEET NF 48-11, 1ST ED, 1965 (U)



A-4

SECRET

25X1C

SECRET

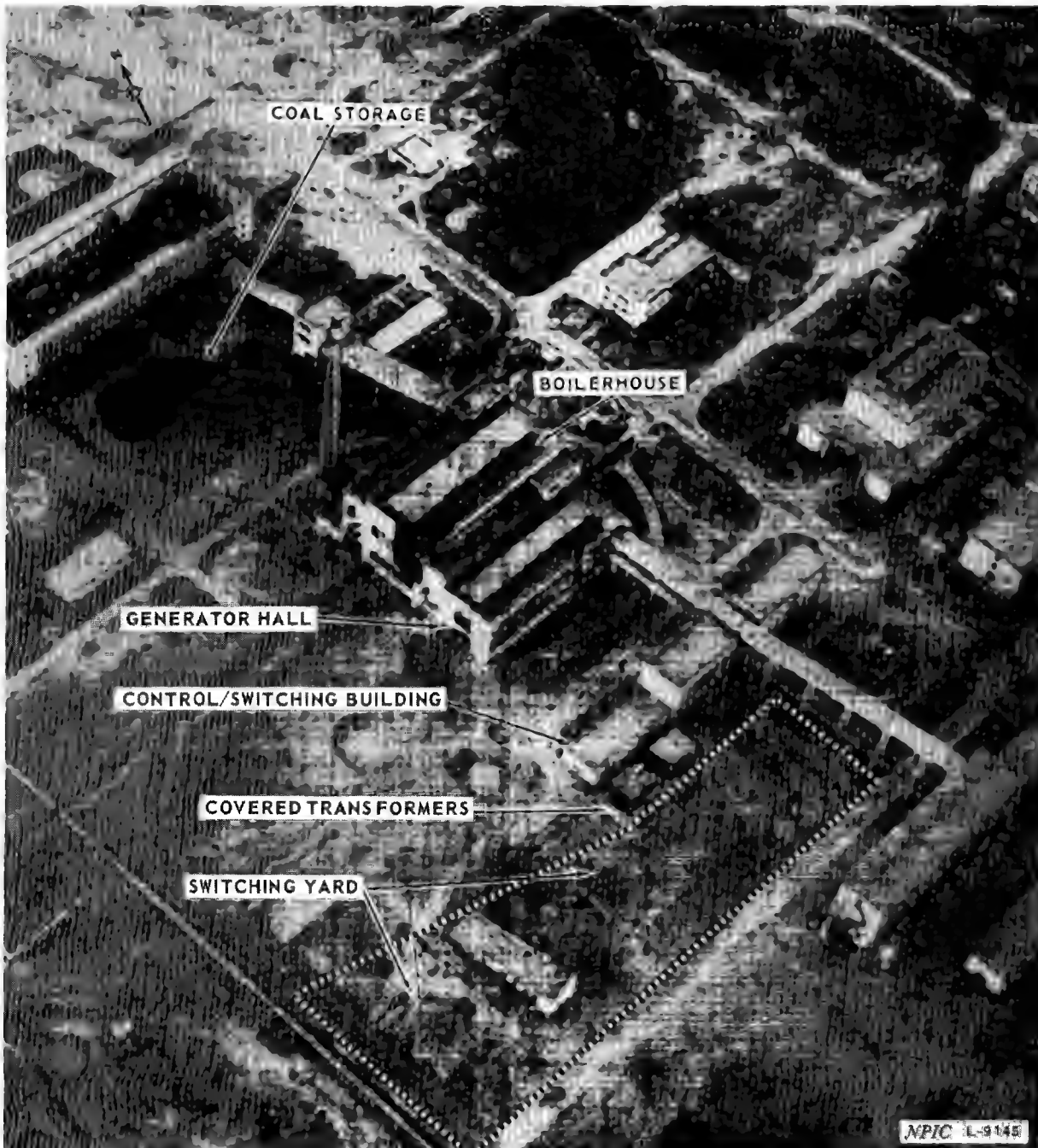
25X1C

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XJ251559  
UTM COORDINATES

BAC GIANG THERMAL ELECTRIC POWERPLANT

21-18-08N 106-12-20E  
GEOGRAPHIC COORDINATES



A-5

SECRET

25X1C



NO FOREIGN DISSEM

25X1A

BE NUMBER

WF745617  
UTM COORDINATES

18-38-42N 105-42-24E  
GEOGRAPHIC COORDINATES

NAME: BEN THUY THERMAL ELECTRIC POWERPLANT

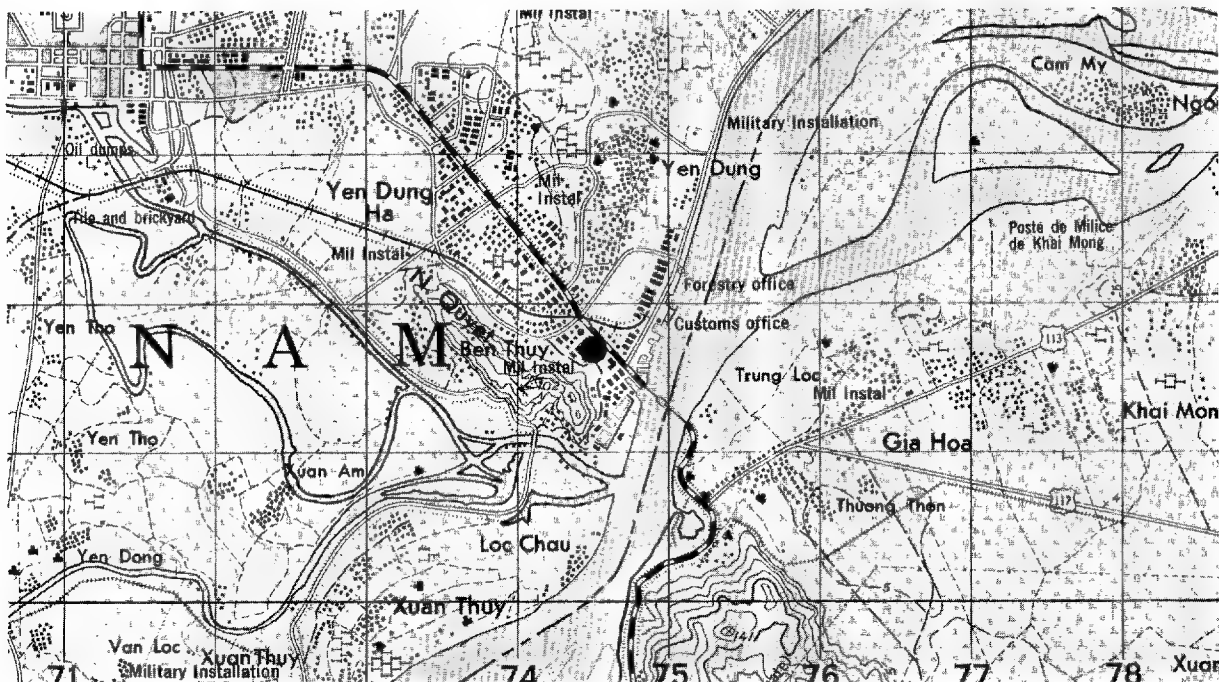
LOCATION: 2.0 NM SE OF VINH, WITHIN THE VINH MILITARY/INDUSTRIAL COMPLEX

DESCRIPTION: THE BOILERHOUSE AND GENERATOR HALL OF THE POWERPLANT HAVE SUSTAINED STRUCTURAL DAMAGE AND THE TRANSFORMER BUILDING HAS BEEN DESTROYED. SIX TRANSFORMER-OIL STORAGE TANKS ASSOCIATED WITH THE PLANT HAVE BEEN DISMANTLED, BUT COAL STORAGE AND 2 LARGE UNDERGROUND POL TANKS REMAIN. A PROBABLE FLUE EXTENDS FROM THE STACK.

25X1D

PHOTO REFERENCES:

MAP REFERENCES: AMS SERIES L7014, SHEET 6146-III, 1ST ED, 1965 (U)  
AMS SERIES JOG(G) 1501, SHEET NE 48-7, 1ST ED, 1965 (U)



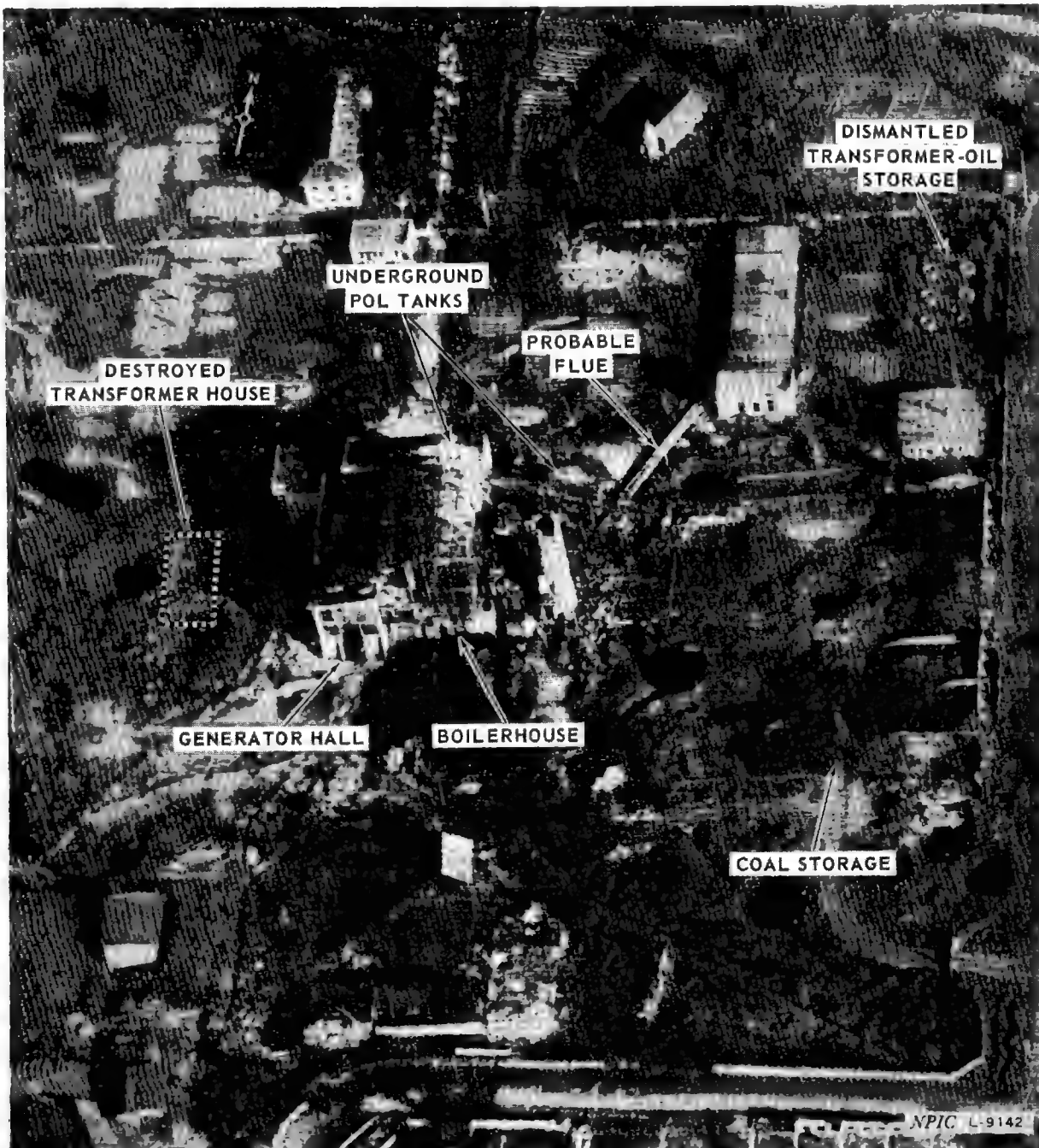
NO FOREIGN DISSEM

NO FOREIGN DISSEM

BEN THUY THERMAL ELECTRIC POWERPLANT

WF745617  
UTM COORDINATES

18-38-42N 105-42-24E  
GEOGRAPHIC COORDINATES



A-7

NO FOREIGN DISSEM

25X1A

[REDACTED]  
BE NUMBER

WG656822  
UTM COORDINATES

19-44-22N 105-37-51E  
GEOGRAPHIC COORDINATES

NAME: CO DINH THERMAL ELECTRIC POWERPLANT

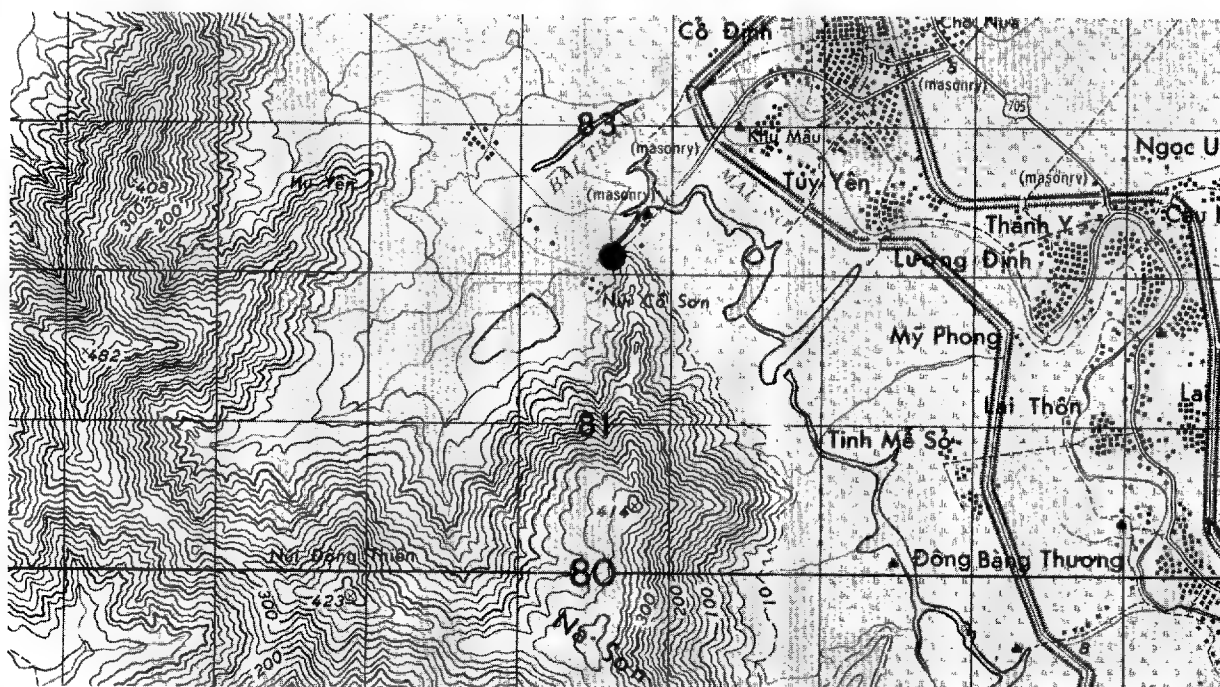
LOCATION: 9 NM SW OF THANH HOA

DESCRIPTION: FACILITY CONSISTED OF A BOILERHOUSE, A GENERATOR HALL, AND A SWITCHING YARD. ALL MAJOR COMPONENTS OF THE POWERPLANT HAVE BEEN DESTROYED BY AIR STRIKES. ONLY A WATER STORAGE TANK WITH AN UNDERGROUND CONDUIT AND A STACK REMAIN.

25X1D PHOTO REFERENCES:

[REDACTED]

MAP REFERENCES: AMS SERIES L7014, SHEET 6148-III, 1ST ED, 1965 (U)  
AMS SERIES JOG(G) 1501, SHEET NE 48-3, 1ST ED, 1965 (U)



WG656822  
UTM COORDINATES

CO DINH THERMAL ELECTRIC POWERPLANT  
25X1D

19-44-22N 105-37-51E  
GEOGRAPHIC COORDINATES



A-9

SECRET

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NO FOREIGN DISSEM

25X1A

BE NUMBER

XJ738076  
UTM COORDINATES

20-51-50N 106-40-20E  
GEOGRAPHIC COORDINATES

NAME: HAI PHONG THERMAL ELECTRIC POWERPLANT WEST

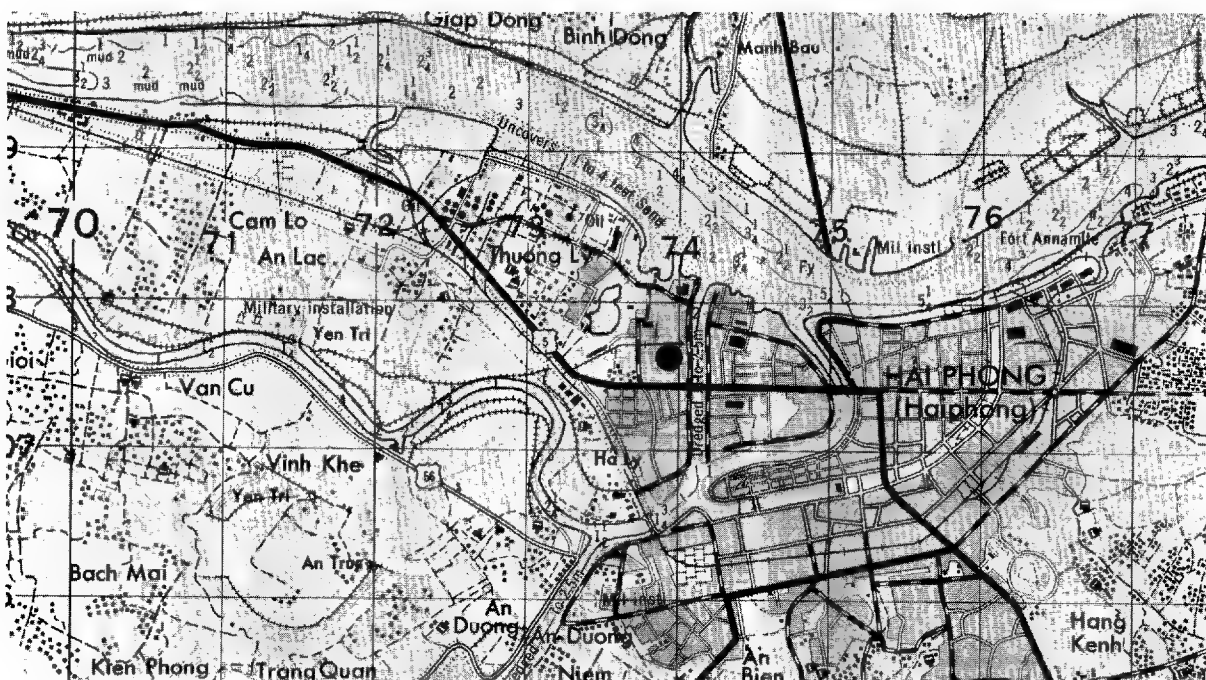
LOCATION: 1.4 NM WEST OF HAI PHONG PORT, WITHIN THE HAI PHONG CEMENT PLANT

DESCRIPTION: THE POWERPLANT CONSISTS OF A COMBINED BOILERHOUSE-GENERATOR HALL, A TRANSFORMER BUILDING, AND 2 COOLING TOWERS. THE BOILERHOUSE-GENERATOR HALL AND 1 OF THE COOLING TOWERS HAVE SUSTAINED STRUCTURAL DAMAGE.

25X1D

PHOTO REFERENCES:

MAP REFERENCES: AMS SERIES L7014, SHEET 6350-IV, 1ST ED, 1965 (U)



SECRET

25X1C

NO FOREIGN DISSEM



SECRET

25X1G

R-146/67

XJ738076  
UTM COORDINATES

HAI PHONG THERMAL ELECTRIC POWERPLANT WEST  
20-51-50N 106-40-20E  
GEOGRAPHIC COORDINATES



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SECRET

NO FOREIGN DISSEM

25X1A

BE NUMBER

XJ783085  
UTM COORDINATES

20-52-10N 106-42-50E  
GEOGRAPHIC COORDINATES

NAME: HAI PHONG THERMAL ELECTRIC POWERPLANT EAST

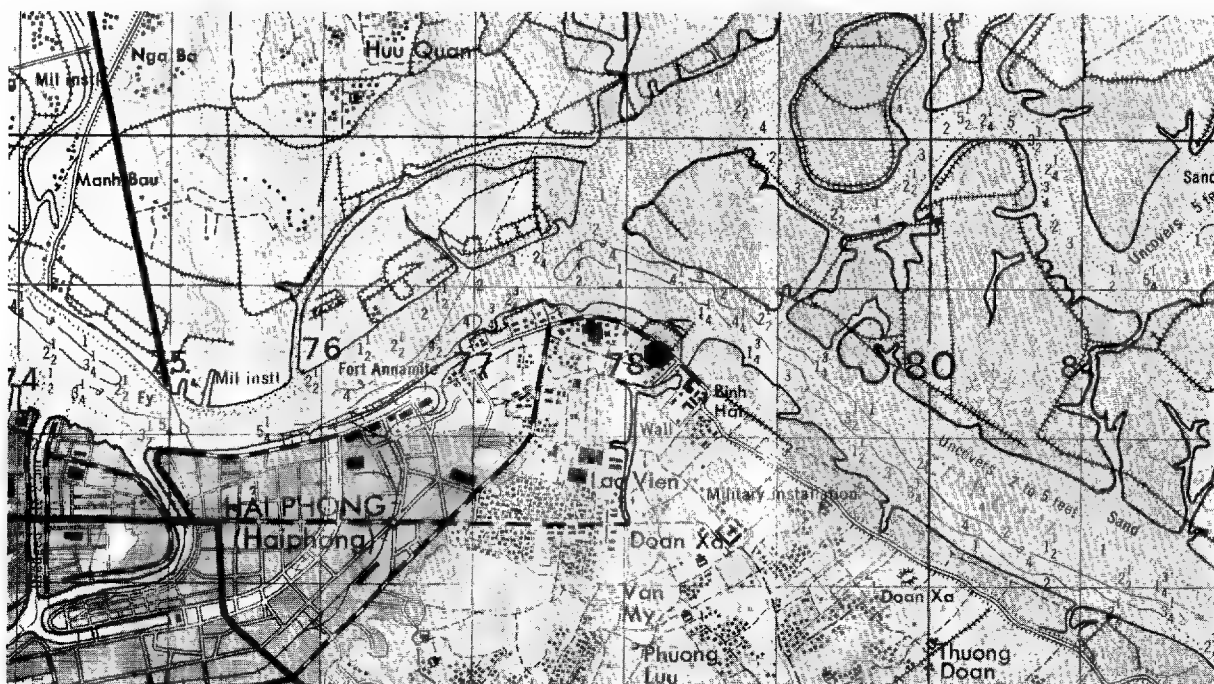
LOCATION: 3.5 NM NNW OF HAIPHONG/CAT BI AIRFIELD

DESCRIPTION: THE POWERPLANT HAS SUSTAINED HEAVY DAMAGE. THE MAJOR COMPONENTS INCLUDE A BOILERHOUSE (STRUCTURAL DAMAGE), A PROBABLE DIESEL GENERATOR HALL (SUPERFICIAL DAMAGE), AND A TRANSFORMER ANNEX. A POL STORAGE AREA HAS BEEN DESTROYED. THE POWERPLANT WAS PREVIOUSLY THE PRIMARY SOURCE OF POWER FOR HAI PHONG.

PHOTO REFERENCES:

25X1D

MAP REFERENCES: AMS SERIES L7014, SHEET 6350-IV, 1ST ED, 1965 (U)  
AMS SERIES JOG(G) 1501, SHEET NF 48-16, 1ST ED, 1965 (U)



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NO FOREIGN DISSEM

SECRET

25X1C

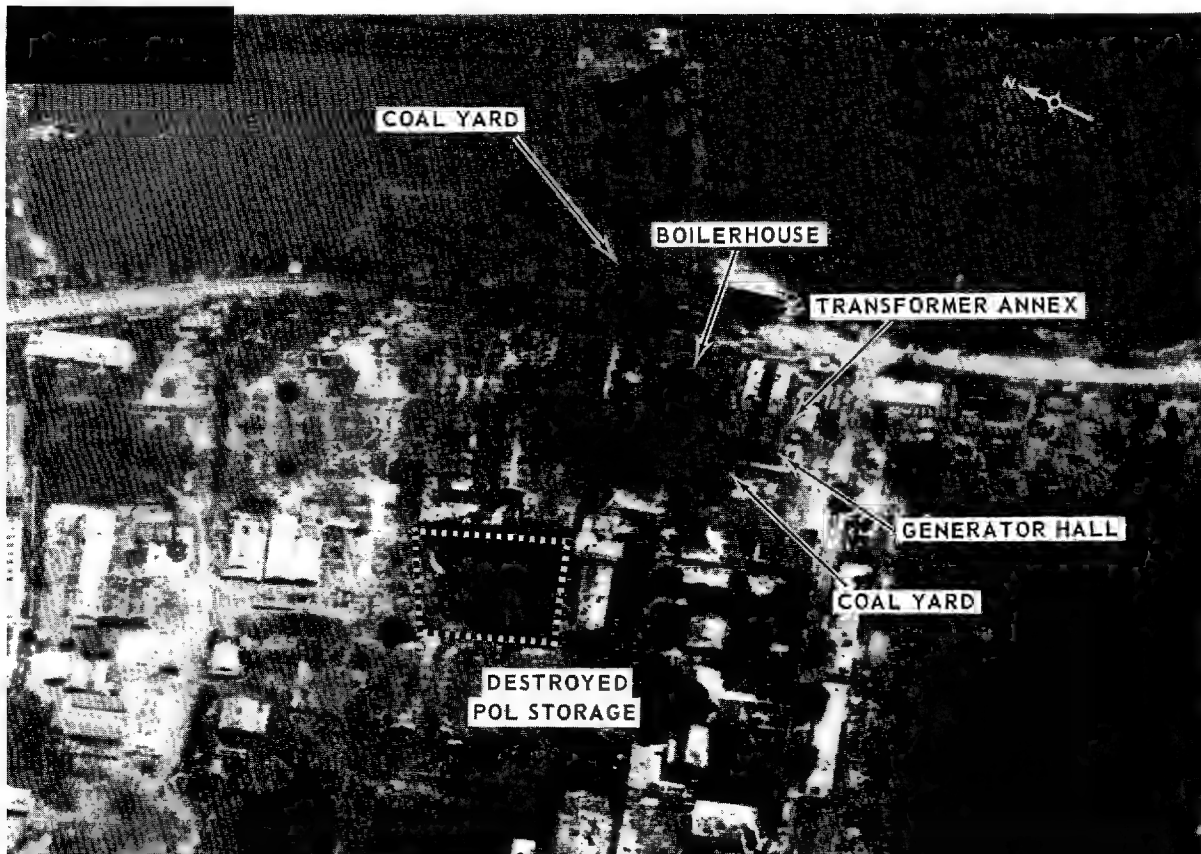
R-146/67

HAI PHONG THERMAL ELECTRIC POWERPLANT EAST

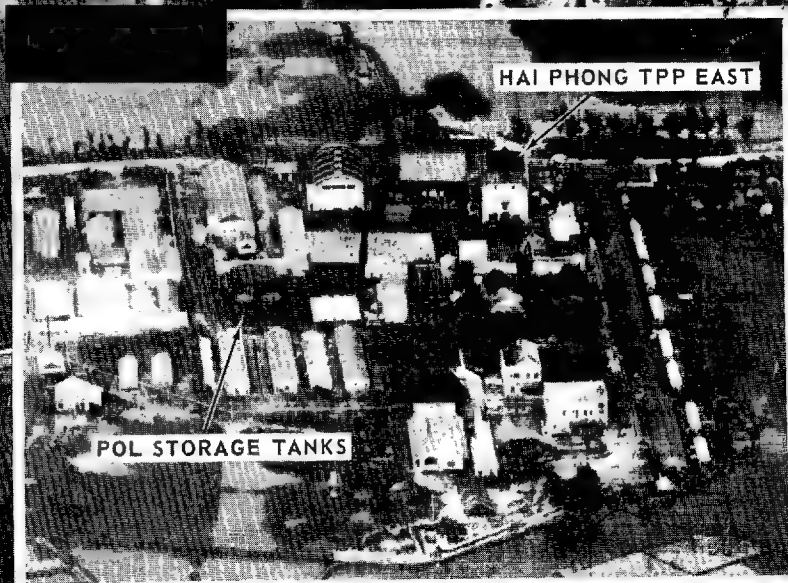
XJ783085  
UTM COORDINATES

20-52-10N 106-42-50E  
GEOGRAPHIC COORDINATES

25X1D



25X1D



NPIC L-9165

A-13

SECRET



25X1A

BE NUMBER

WJ880270  
UTM COORDINATES

21-02-35N 105-50-51E  
GEOGRAPHIC COORDINATES

NAME: HA NOI THERMAL ELECTRIC POWERPLANT

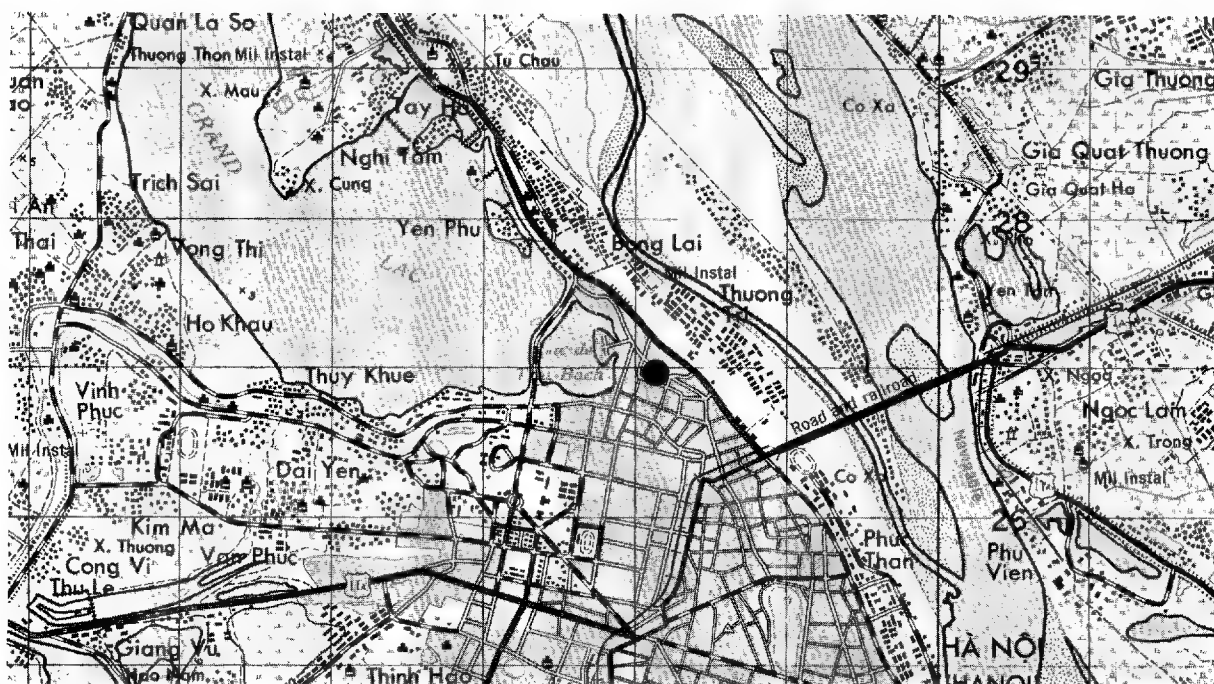
LOCATION: 2.3 NM NORTH OF HANOI/BAC MAI AIRFIELD

DESCRIPTION: THE FACILITY CONSISTS OF A GENERATOR HALL, A BOILERHOUSE, A PROBABLE TRANSFORMER/SWITCHING BUILDING, AND A CONTROL BUILDING. A SHOP AREA, AN ADMINISTRATION AREA, AND A COAL STORAGE AREA ARE ALSO ASSOCIATED WITH THE PLANT.

25X1D

PHOTO REFERENCES:

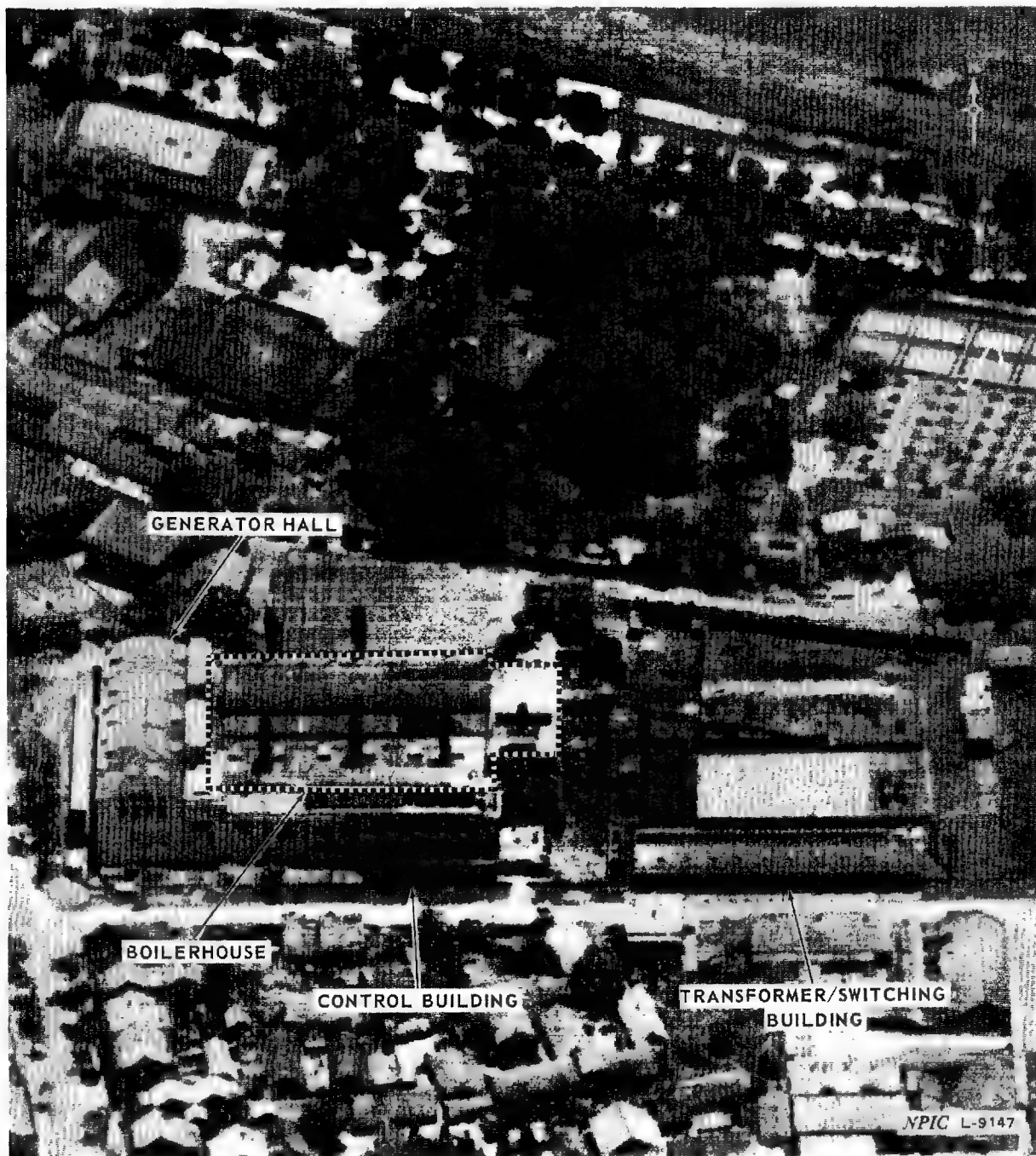
MAP REFERENCES: AMS SERIES L7014, SHEET 6151-II, 1ST ED, 1965 (U)  
AMS SERIES JOG(G) 1501, SHEET NF 48-11, 1ST ED, 1965 (U)



WJ880270  
UTM COORDINATES

HA NOI THERMAL ELECTRIC POWERPLANT

21-02-35N 105-50-51E  
GEOGRAPHIC COORDINATES



A-15

SECRET

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NO FOREIGN DISSEM

25X1A

BE NUMBER

YJ201168  
UTM COORDINATES

20-56-28N 107-07-05E  
GEOGRAPHIC COORDINATES

NAME: HON GAI THERMAL ELECTRIC POWERPLANT

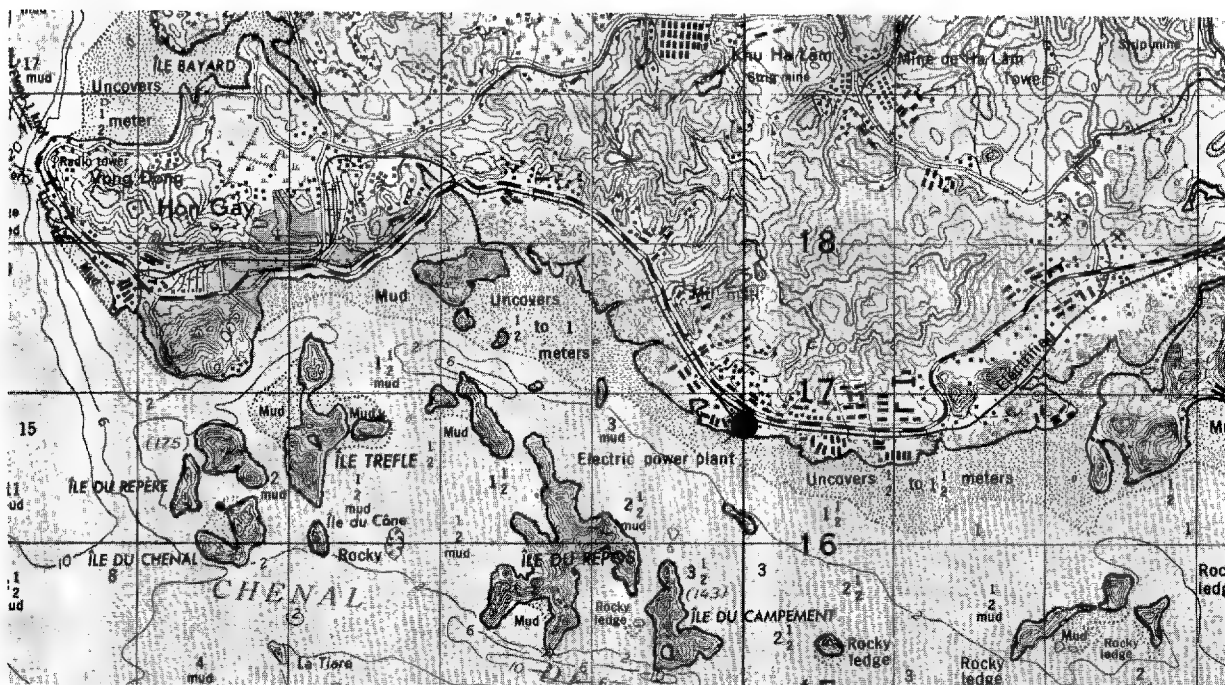
LOCATION: 1.9 NM ESE OF HON GAI

DESCRIPTION: THE POWERPLANT CONSISTS OF A BOILERHOUSE, A GENERATOR HALL, A TRANSFORMER AND SWITCHING BUILDING, A PUMPING STATION, AND SEVERAL SUPPORT BUILDINGS. THE BOILERHOUSE IS DIVIDED INTO 2 SECTIONS, 1 CONTAINING 5 BOILERS (WITH SUPERFICIAL DAMAGE) AND THE OTHER CONTAINING 2 BOILERS (WITH STRUCTURAL DAMAGE).

25X1D

PHOTO REFERENCES:

MAP REFERENCES: AMS SERIES L7014, SHEET 6450-IV, 1ST ED, 1965 (U)  
AMS SERIES JOG(G) 1501, SHEET NF 48-16, 1ST ED, 1965 (U)



A-16

SECRET

25X1C

NO FOREIGN DISSEM

SECRET

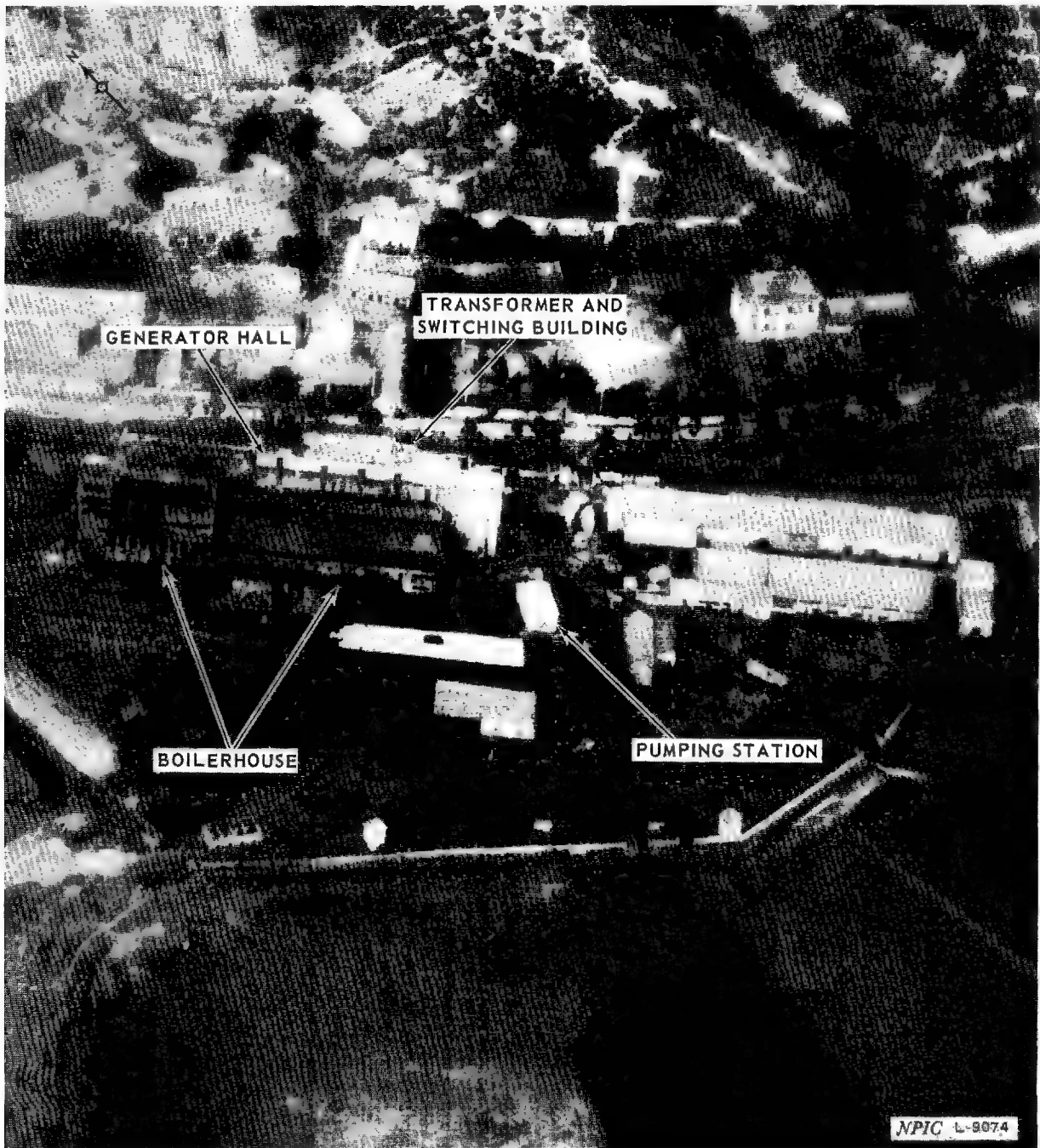
25X1C

R-146/67

HON GAI THERMAL ELECTRIC POWERPLANT

YJ201168  
UTM COORDINATES

20-56-28N 107-07-05E  
GEOGRAPHIC COORDINATES



A-17

SECRET

25X1C



NO FOREIGN DISSEM

25X1A

BE NUMBER

XJ268740  
UTM COORDINATES

21-27-57N 106-13-26E  
GEOGRAPHIC COORDINATES

NAME: BO HA THERMAL ELECTRIC POWERPLANT SOI THON

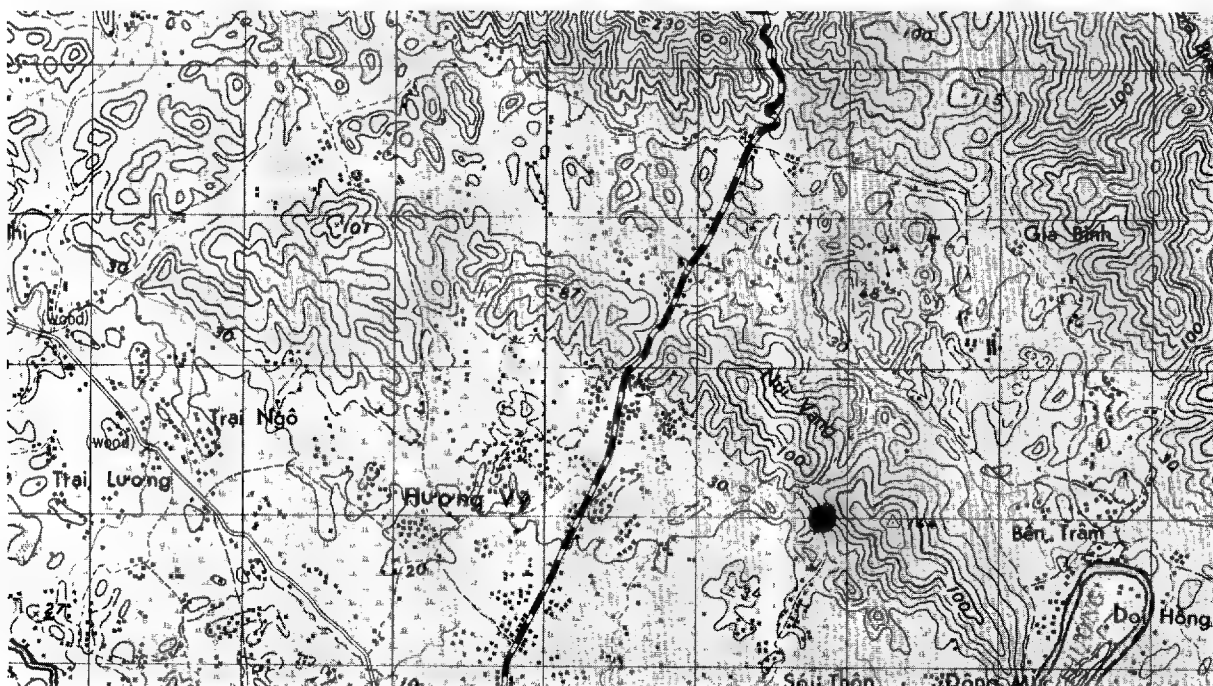
LOCATION: 10.3 NM NNE OF BAC GIANG

DESCRIPTION: THE POWERPLANT CONSISTS OF A BOILERHOUSE AND GENERATOR HALL, A CONTROL/TRANSFORMER BUILDING, AND A SWITCHING YARD.

25X1D

PHOTO REFERENCES:

MAP REFERENCES: AMS SERIES L7014, SHEET 6251-IV, 1ST ED, 1965 (U)  
AMS SERIES JOG(G) 1501, SHEET NF 48-11, 1ST ED, 1965 (U)



A-18

NO FOREIGN DISSEM

XJ268740  
UTM COORDINATES

BO HA THERMAL ELECTRIC POWERPLANT SOI THON

21-27-57N 106-13-26E  
GEOGRAPHIC COORDINATES



A-19

BE NUMBER

UK947877

22-29-31N 103-58-29E

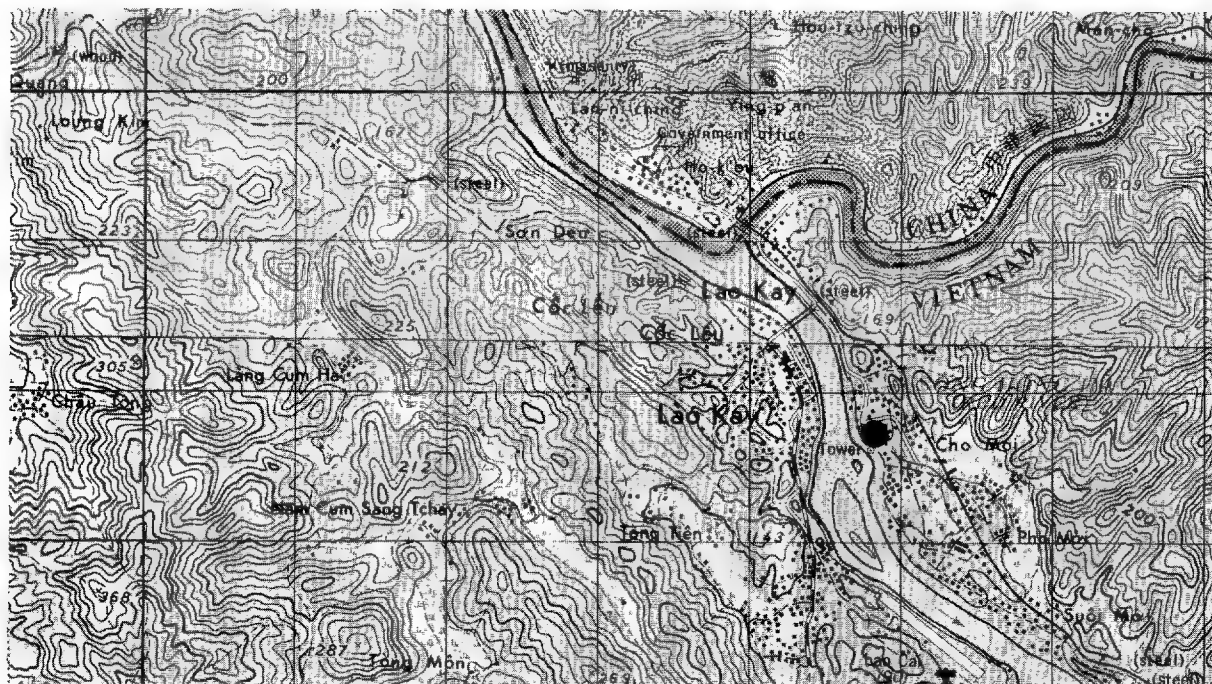
NAME: LAO CAI THERMAL ELECTRIC POWERPLANT

LOCATION: 1 NM NNE OF LAO CAI AIRFIELD

DESCRIPTION: THE POWERPLANT CONSISTS OF A BOILERHOUSE (WITH 3 BOILERS), A GENERATOR HALL, A REVETTED TRANSFORMER, A SWITCHING YARD, A COAL YARD, A COAL PROCESSING BUILDING, AND SUPPORT BUILDINGS. SIX TRANSFORMER-OIL STORAGE TANKS ASSOCIATED WITH THE PLANT HAVE BEEN DISMANTLED.

**PHOTO REFERENCES:**

MAP REFERENCES: AMS SERIES L7014, SHEET 5753-I, 1ST ED, 1965 (U)  
AMS SERIES JOG(G) 1501, SHEET NF 48-6, 1ST ED, 1965 (U)



A-20

NO FOREIGN DISSEM

SECRET

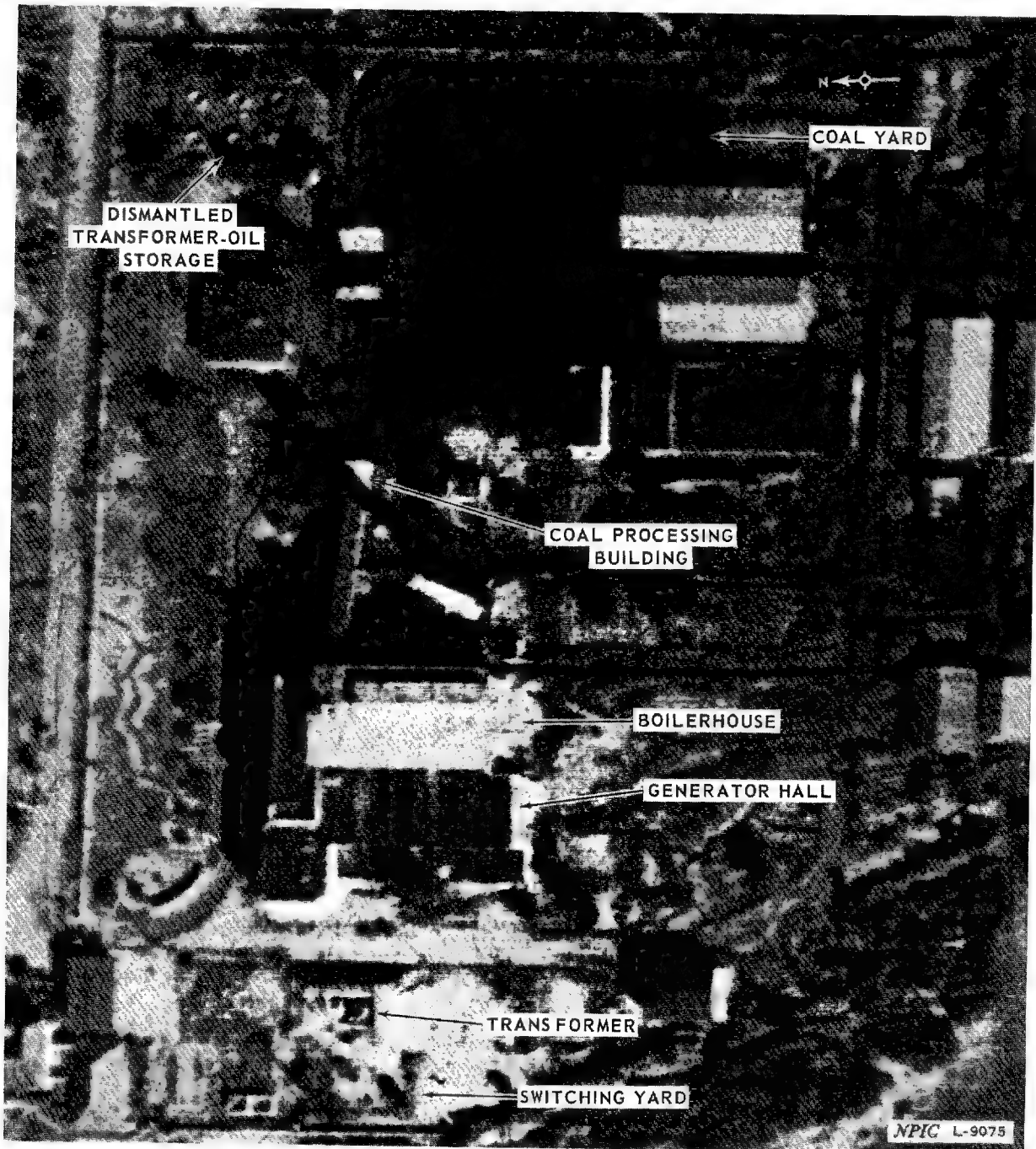
25X1C

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LAO CAI THERMAL ELECTRIC POWERPLANT

UK947877  
UTM COORDINATES

22-29-31N 103-58-29E  
GEOGRAPHIC COORDINATES



A-21

SECRET



NO FOREIGN DISSEM [REDACTED]

25X1A

[REDACTED]  
BE NUMBER

XH228582  
UTM COORDINATES

20-25-16N 106-10-45E  
GEOGRAPHIC COORDINATES

NAME: NAM DINH THERMAL ELECTRIC POWERPLANT

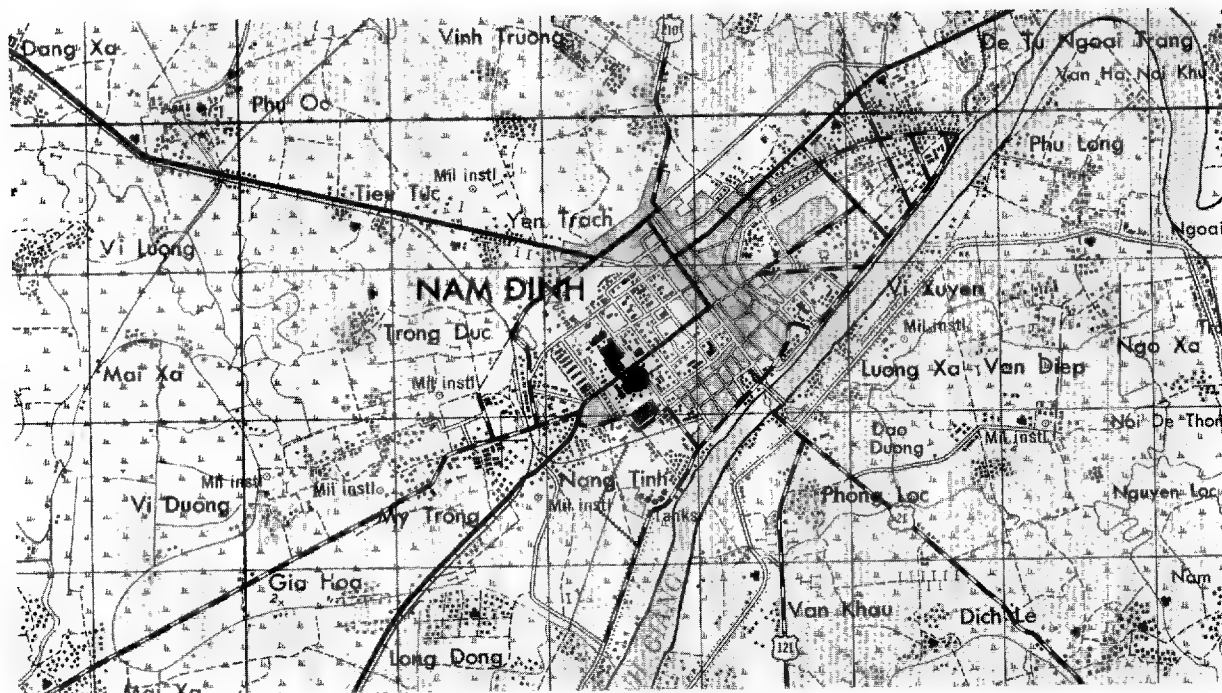
LOCATION: 0.5 NM NORTH OF NAM DINH

DESCRIPTION: THE POWERPLANT CONSISTS OF A GENERATOR HALL, A BOILERHOUSE, 4 NATURAL-DRAFT COOLING TOWERS, AND A COAL STORAGE AREA. THE GENERATOR HALL AND COOLING TOWERS HAVE SUSTAINED SUPERFICIAL DAMAGE. NO SWITCHING YARD IS OBSERVED.

25X1D

PHOTO REFERENCES: [REDACTED]

MAP REFERENCES: AMS SERIES L7014, SHEET 6249-IV, 1ST ED, 1965 (U)  
AMS SERIES JOG(G) 1501, SHEET NE 48-15, 1ST ED, 1965, (U)



A-22

~~SECRET~~

25X1C

NO FOREIGN DISSEM [REDACTED]

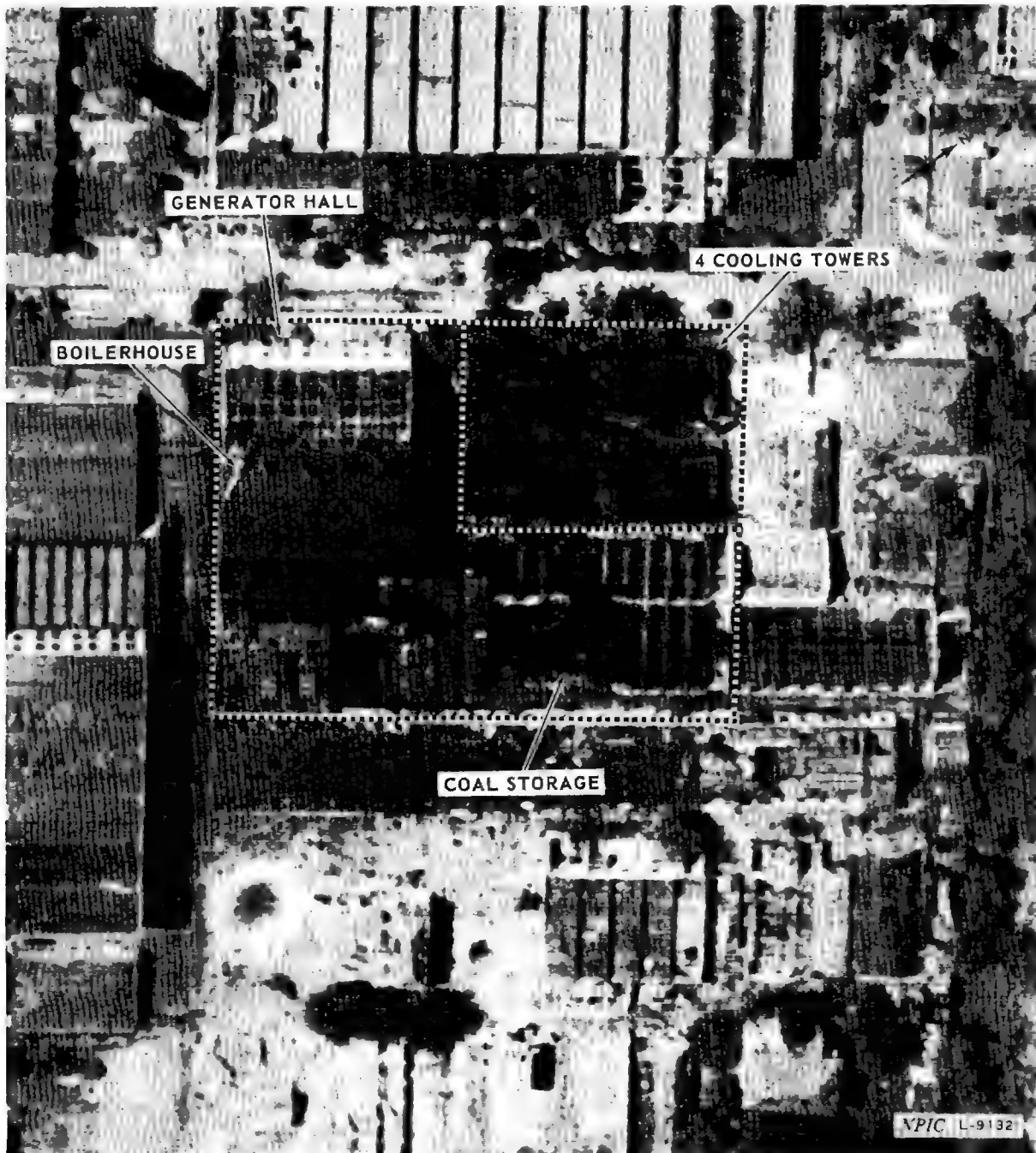
SECRET

25X1C

NAM DINH THERMAL ELECTRIC POWERPLANT

XH228582  
UTM COORDINATES

20-25-16N 106-10-45E  
GEOGRAPHIC COORDINATES



VPIC L-9132

A-23

SECRET

SECRET

NO FOREIGN DISSEM

25X1A

BE NUMBER

YH140926  
UTM COORDINATES

20-43-20N 107-03-25E  
GEOGRAPHIC COORDINATES

NAME: DAO CAT BA (PROBABLE) THERMAL ELECTRIC POWERPLANT

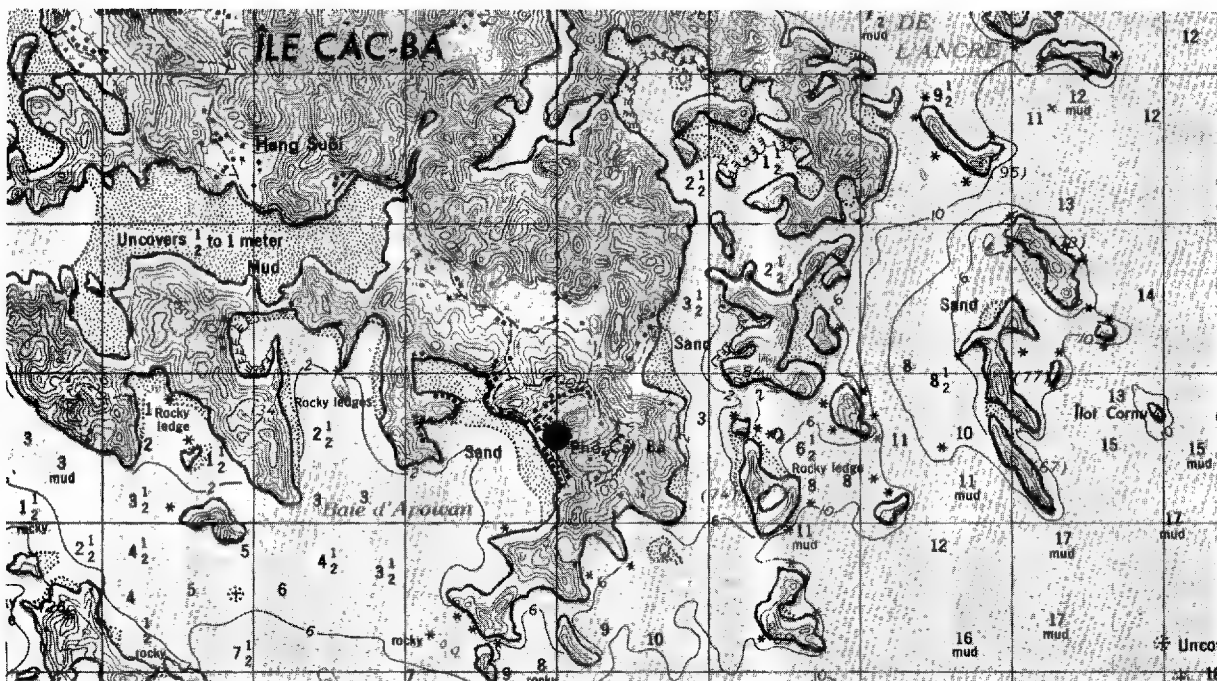
LOCATION: 14.2 NM EAST OF DO SON AIRFIELD

DESCRIPTION: THE PROBABLE POWERPLANT IS A SECURED INSTALLATION CONSISTING OF A PROBABLE BOILERHOUSE AND GENERATOR HALL (WITH STACK), A SUSPECT TRANSFORMER ANNEX, AND A COAL YARD.

25X1D

PHOTO REFERENCES:

MAP REFERENCES: AMS SERIES L7014, SHEET 6450-III, 1ST ED, 1965 (U)  
AMS SERIES JOG(G) 1501, SHEET NF 48-16, 1ST ED, 1965 (U)



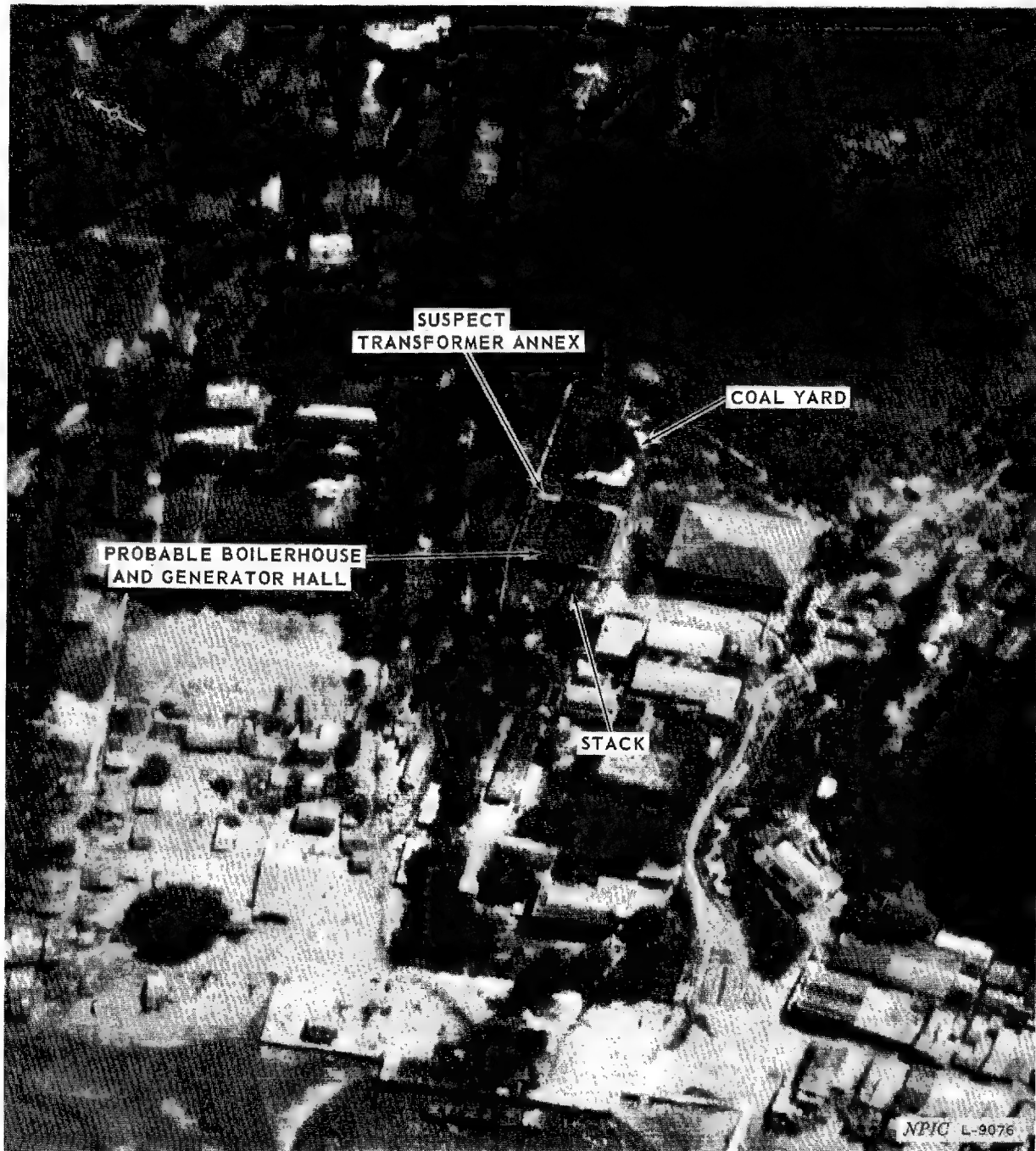
A-24

SECRET

25X1C

NO FOREIGN DISSEM

DAO CAT BA (PROBABLE) THERMAL ELECTRIC POWERPLANT  
YH140926 20-43-20N 107-03-25E  
UTM COORDINATES GEOGRAPHIC COORDINATES



SECRET

25X1C

NO FOREIGN DISSEM

25X1A

BE NUMBER

WH959983  
UTM COORDINATES

20-47-04N 105-55-18E  
GEOGRAPHIC COORDINATES

NAME: PHU LY (POSSIBLE) THERMAL ELECTRIC POWERPLANT SUGAR REFINERY VAN DIEM

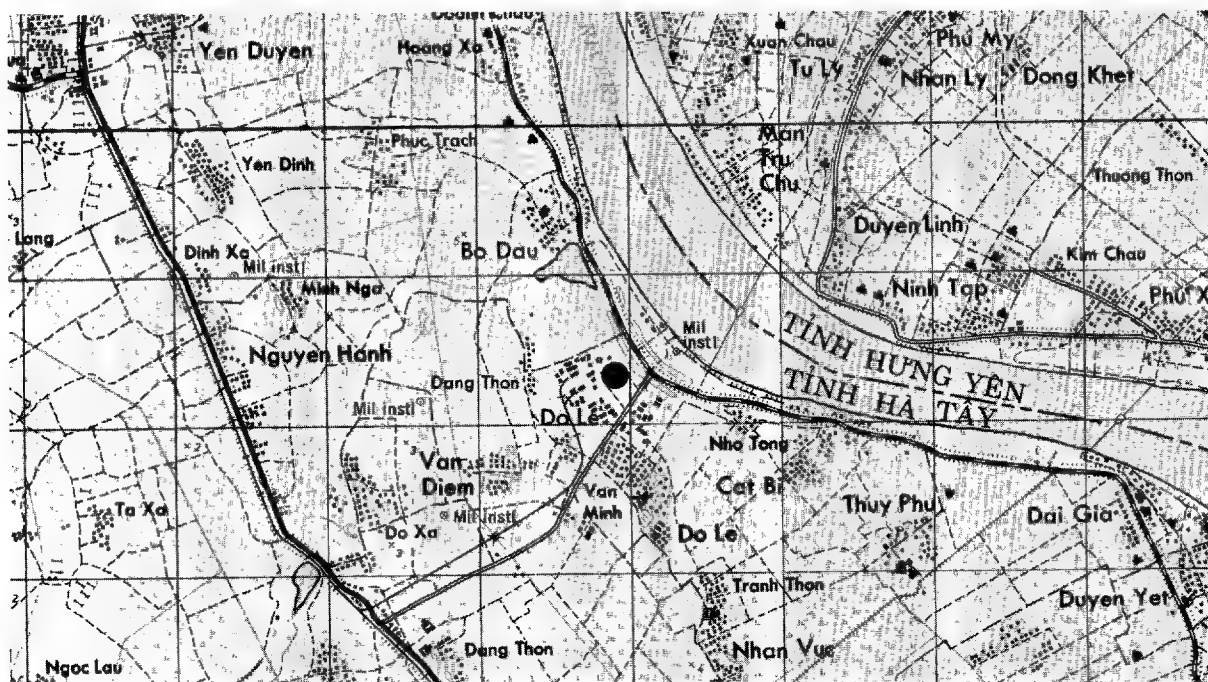
LOCATION: 2 NM NORTH OF PHU MY AND 13 NM SSE OF HA NOI

DESCRIPTION: THE POSSIBLE POWERPLANT CONSISTS OF A POSSIBLE BOILERHOUSE, A POSSIBLE GENERATOR HALL, AND A PROBABLE TRANSFORMER BUILDING.

25X1D

PHOTO REFERENCES:

MAP REFERENCES: AMS SERIES L7014, SHEET 6150-I, 1ST ED, 1965 (U)  
AMS SERIES JOG(A) 1501, SHEET NF 48-15, 1ST ED, 1965 (U)



A-26

SECRET

25X1C

NO FOREIGN DISSEM

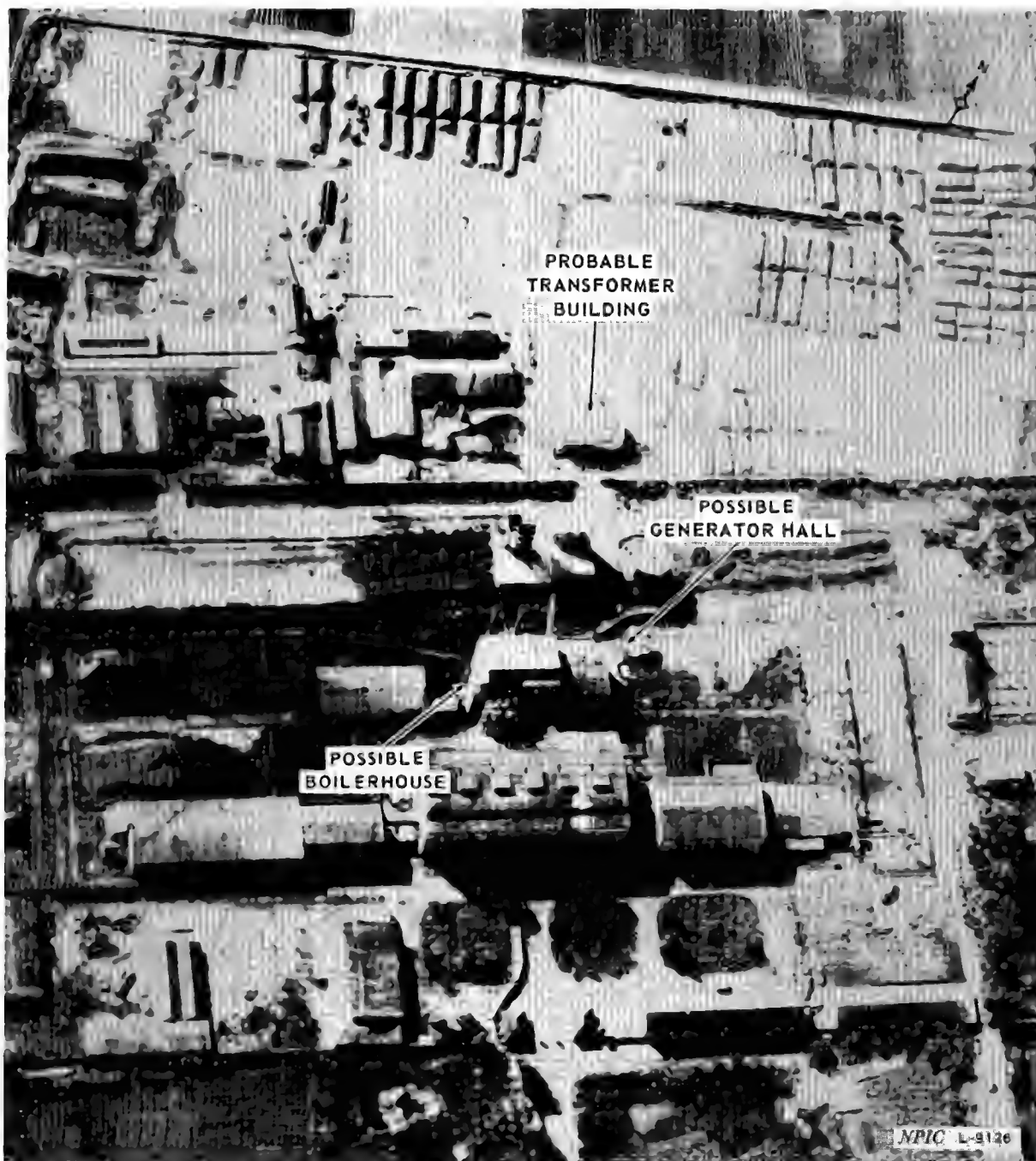


SECRET

25X1C

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PHU LY (POSSIBLE) THERMAL ELECTRIC POWERPLANT SUGAR REFINERY VAN DIEM  
WH959983  
UTM COORDINATES  
20-47-04N 105-55-18E  
GEOGRAPHIC COORDINATES



A-27

SECRET

25X1A

BE NUMBER

WJ847897  
UTM COORDINATES

21-36-45N 105-49-08E  
GEOGRAPHIC COORDINATES

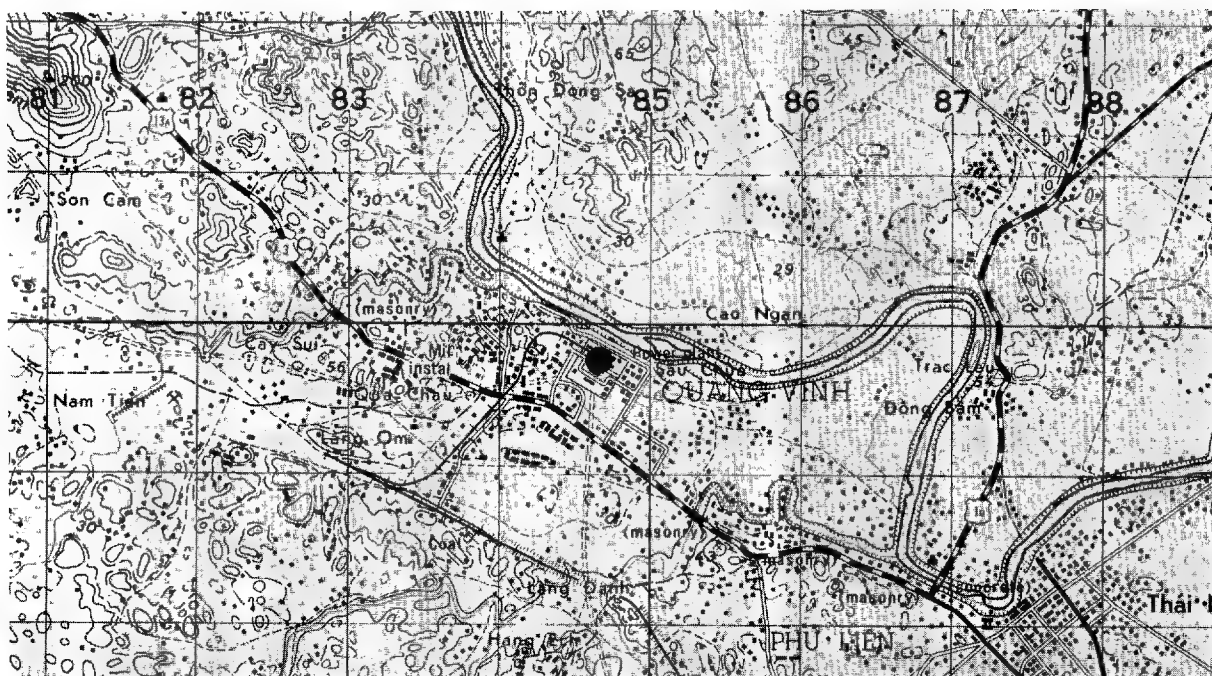
NAME: THAI NGUYEN THERMAL ELECTRIC POWERPLANT

LOCATION: 2 NM NW OF THAI NGUYEN

DESCRIPTION: THE FACILITY CONSISTS OF A BOILERHOUSE (3 WITH BOILERS), A GENERATOR HALL, A CONTROL/SWITCHING BUILDING, A SWITCHING YARD, 6 COVERED TRANSFORMERS, AND AN ADMINISTRATION BUILDING. ALSO INCLUDED IN THE FACILITY BUT NOT SHOWN ON THE GRAPHIC ARE A COAL PROCESSING BUILDING, A COAL STORAGE AREA, 6 TRANSFORMER-OIL TANKS, A PUMPING STATION, AND SEVERAL SUPPORT BUILDINGS. THE BOILERHOUSE AND 2 TANKS HAVE SUSTAINED STRUCTURAL DAMAGE AND THE GENERATOR HALL AND CONTROL/SWITCHING BUILDING HAVE SUSTAINED SUPERFICIAL DAMAGE.

25X1D PHOTO REFERENCES:

MAP REFERENCES: AMS SERIES L7014, SHEET 6152-II, 1ST ED, 1965 (U)  
AMS SERIES JOG(G) 1501, SHEET NF 48-11, 1ST ED, 1965 (U)



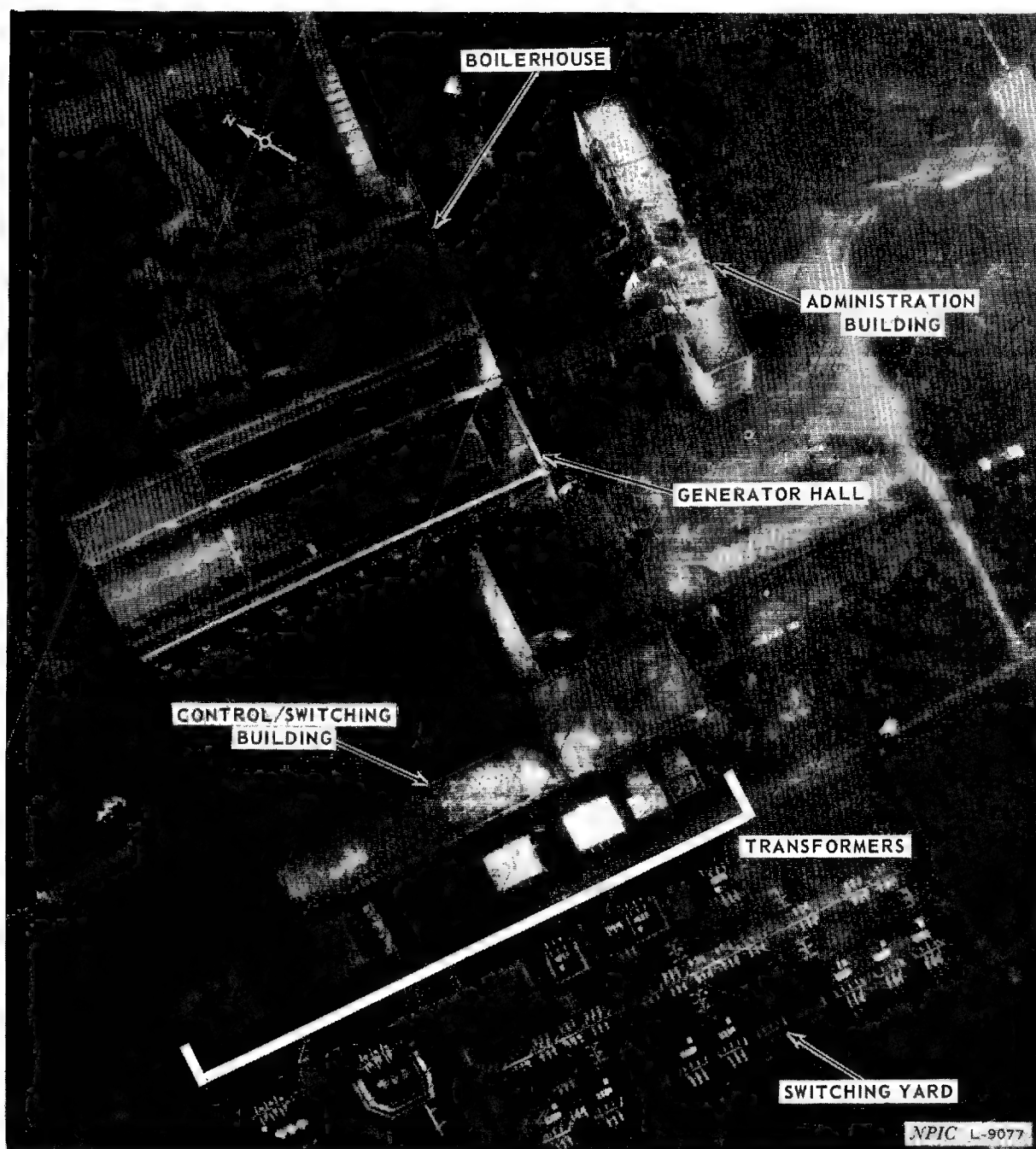
A-28

NO FOREIGN DISSEM

THAI NGUYEN THERMAL ELECTRIC POWERPLANT

WJ847897  
UTM COORDINATES

21-36-45N 105-49-08E  
GEOGRAPHIC COORDINATES



NO FOREIGN DISSEM



SECRET

NO FOREIGN DISSEM

25X1A

BE NUMBER

WG828932  
UTM COORDINATES

19-50-03N 105-47-28E  
GEOGRAPHIC COORDINATES

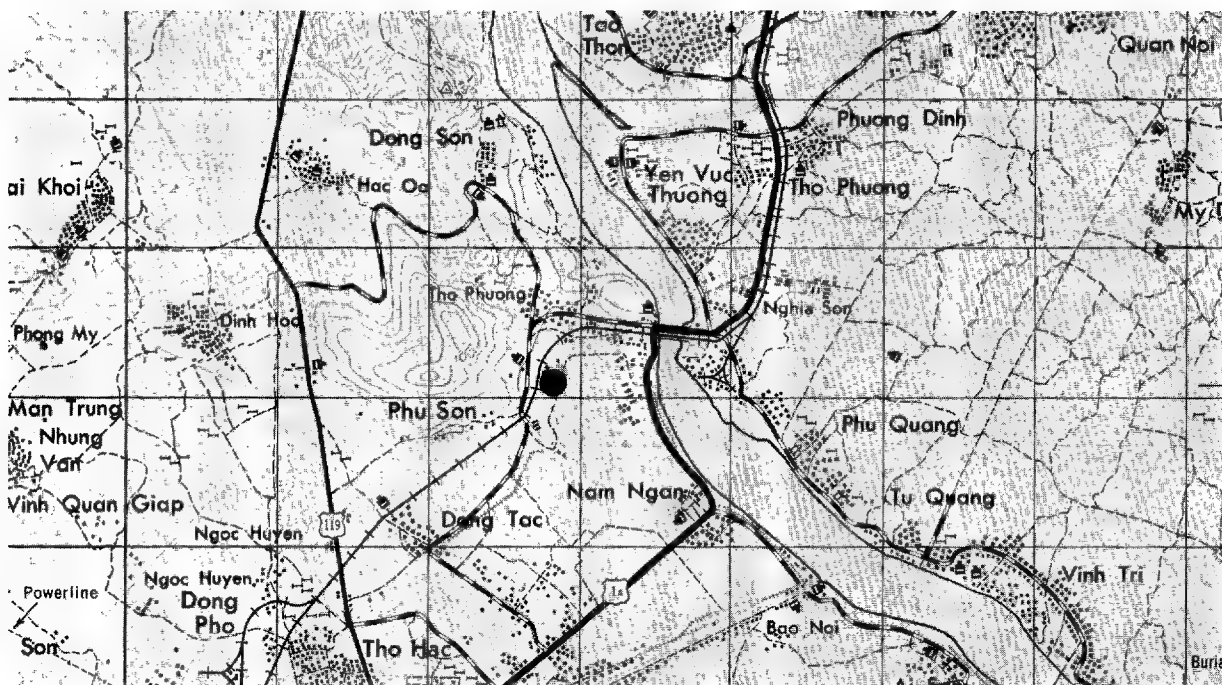
NAME: THANH HOA THERMAL ELECTRIC POWERPLANT

LOCATION: 2.0 NM NNE OF THANH HOA

DESCRIPTION: THE POWERPLANT CONSISTS OF A BOILER HOUSE, A GENERATOR HALL, A SWITCHING YARD, AND ASSOCIATED BUILDINGS. THE BOILER HOUSE AND GENERATOR HALL HAVE SUSTAINED AT LEAST SUPERFICIAL DAMAGE WHILE THE SWITCHING YARD HAS SUSTAINED STRUCTURAL DAMAGE. AN UNDERGROUND FLUE IS UNDER CONSTRUCTION.

25X1D PHOTO REFERENCES:

MAP REFERENCES: AMS SERIES L7014, SHEET 6148-I, 1ST ED, 1965 (U)  
AMS SERIES JOG(G) 1501, SHEET NE 48-3, 1ST ED, 1965 (U)



SECRET

NO FOREIGN DISSEM

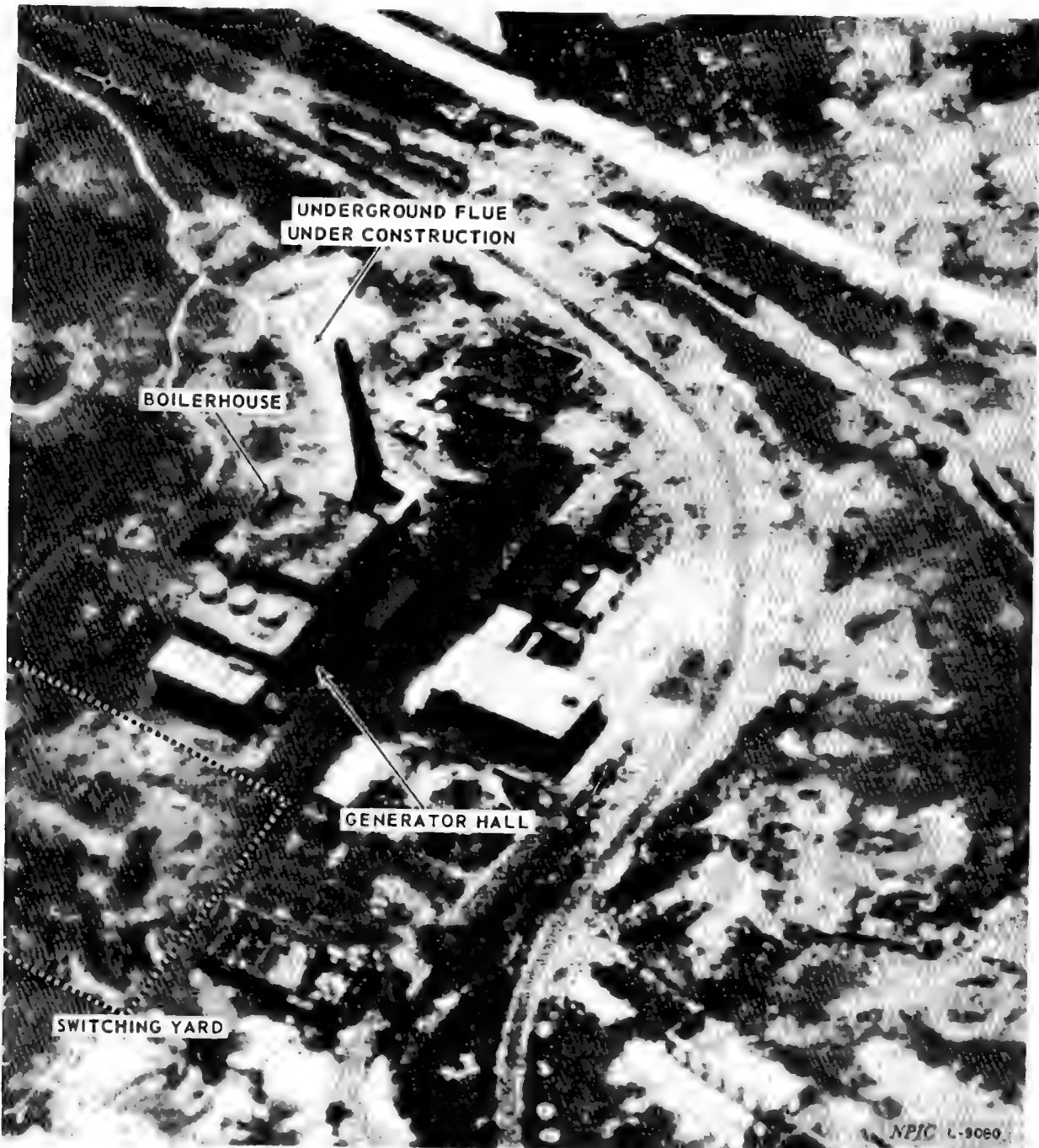
NO FOREIGN DISSEM

R-146/67

THANH HOA THERMAL ELECTRIC POWERPLANT

WG828932  
UTM COORDINATES

19-50-03N 105-47-28E  
GEOGRAPHIC COORDINATES



A-31

NO FOREIGN DISSEM

SECRET

SECRET

R-146/67

NO FOREIGN DISSEM

25X1A

BE NUMBER

XJ861271  
UTM COORDINATES

21-02-10N 106-47-28E  
GEOGRAPHIC COORDINATES

NAME: UONG BI THERMAL ELECTRIC POWERPLANT

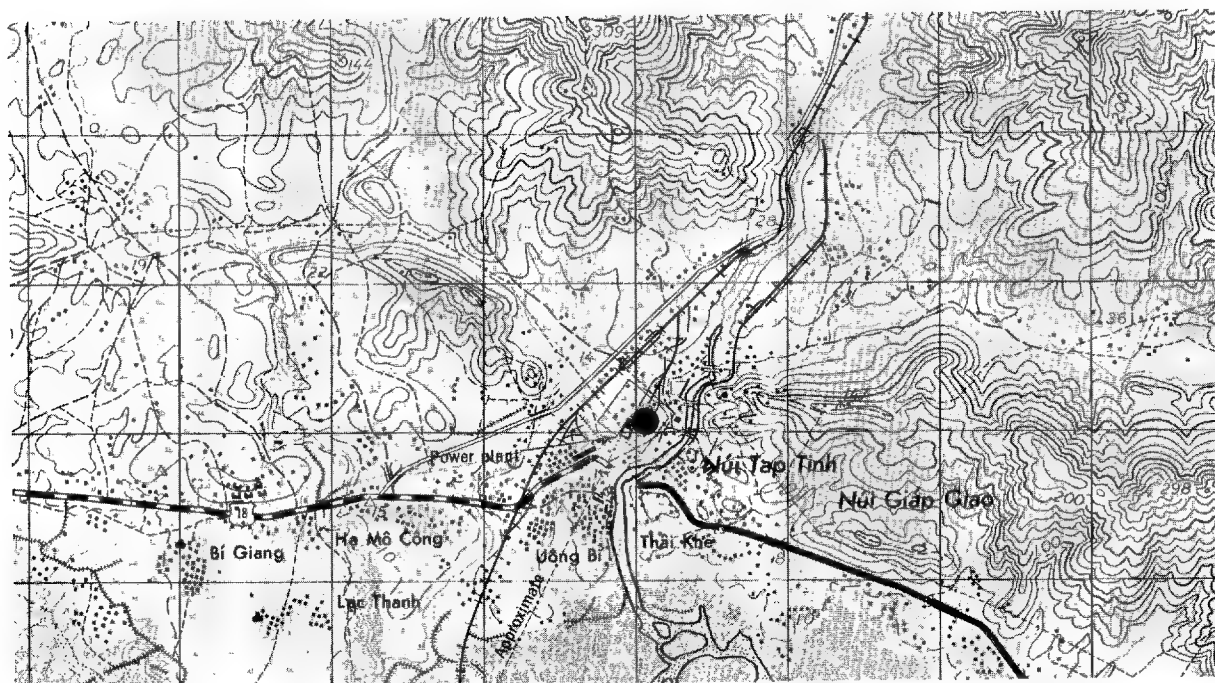
LOCATION: AT UONG BI AND 13 NM NNE OF HAI PHONG

DESCRIPTION: THE POWERPLANT CONSISTS OF A GENERATOR HALL, A BOILERHOUSE (WITH 4 BOILERS), 2 SWITCHING YARDS (110 AND 35-KV), COAL STORAGE, POL STORAGE (8 TANKS), AN ADMINISTRATION BUILDING, AND SEVERAL SUPPORT BUILDINGS. THE BOILERHOUSE, GENERATOR HALL, AND ADMINISTRATION BUILDING ALL HAVE SUSTAINED AT LEAST SUPERFICIAL DAMAGE. TWO OF THE 8 POL STORAGE TANKS HAVE STRUCTURAL DAMAGE. WITH THE VERTICAL STACK DESTROYED, THE FLUES FROM THE BOILERHOUSE WERE CONNECTED TO A LONG HORIZONTAL FLUE.

25X1D

PHOTO REFERENCES:

MAP REFERENCES: AMS SERIES L7014, SHEET 6351-II, 1ST ED, 1965 (U)  
AMS SERIES JOG(G) 1501, SHEET NF 48-12, 1ST ED, 1965 (U)



SECRET

25X1C

NO FOREIGN DISSEM

~~SECRET~~

NO FOREIGN DISSEM

UONG BI THERMAL ELECTRIC POWERPLANT

XJ861271  
UTM COORDINATES

21-02-10N 106-47-28E  
GEOGRAPHIC COORDINATES



A-33

~~SECRET~~

NO FOREIGN DISSEM

NO FOREIGN DISSEM

SECRET

25X1A

BE NUMBER

WJ440550  
UTM COORDINATES

21-18-00N 105-25-20E  
GEOGRAPHIC COORDINATES

NAME: VIET TRI THERMAL ELECTRIC POWERPLANT

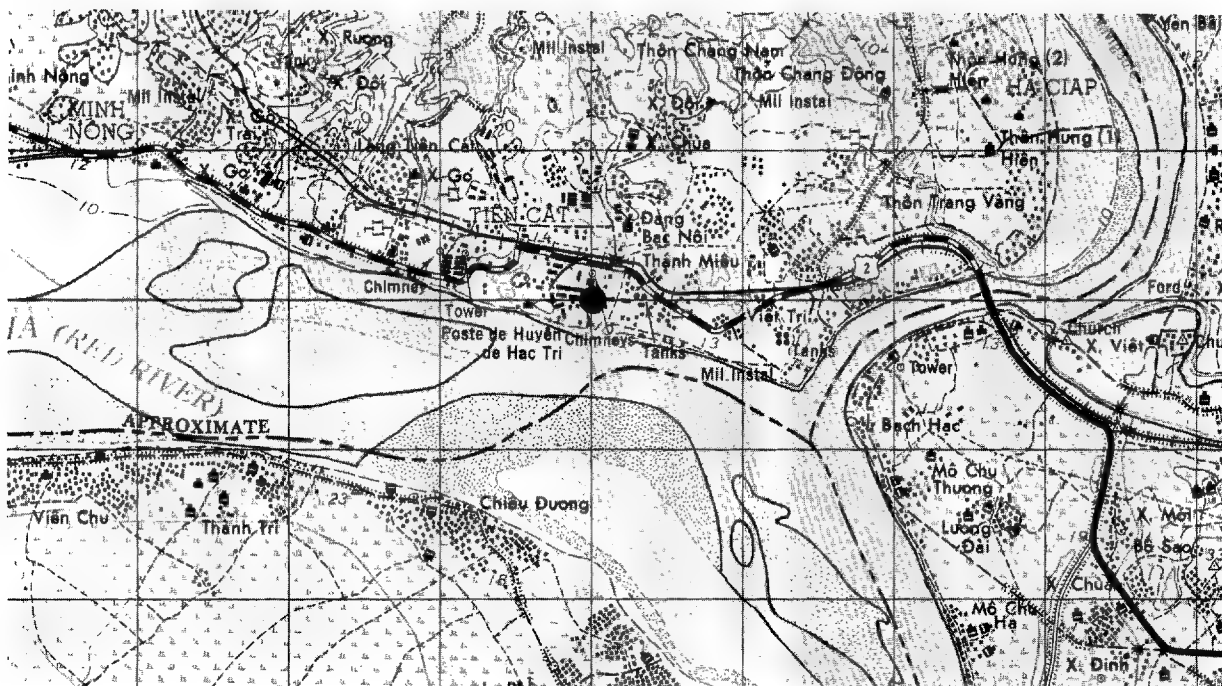
LOCATION: 1 NM WEST OF VIET TRI

DESCRIPTION: LOCATED WITHIN THE VIET TRI PAPER COMBINE, THE POWERPLANT CONSISTS OF A BOILERHOUSE, A GENERATOR HALL, A PROBABLE CONTROL BUILDING, A TRANSFORMER AND SWITCHING YARD, A COAL PROCESSING BUILDING, A COAL YARD, 6 TRANSFORMER-OIL STORAGE TANKS, AND SUPPORT BUILDINGS. THE TRANSFORMER AND SWITCHING YARD HAVE SUSTAINED DAMAGE.

25X1D

PHOTO REFERENCES:

MAP REFERENCES: AMS SERIES L7014, SHEET 6051-I, 1ST ED, 1965 (U)  
AMS SERIES JOG(G) 1501, SHEET NF 48-11, 1ST ED, 1965 (U)



A-34

SECRET

25X1C

NO FOREIGN DISSEM



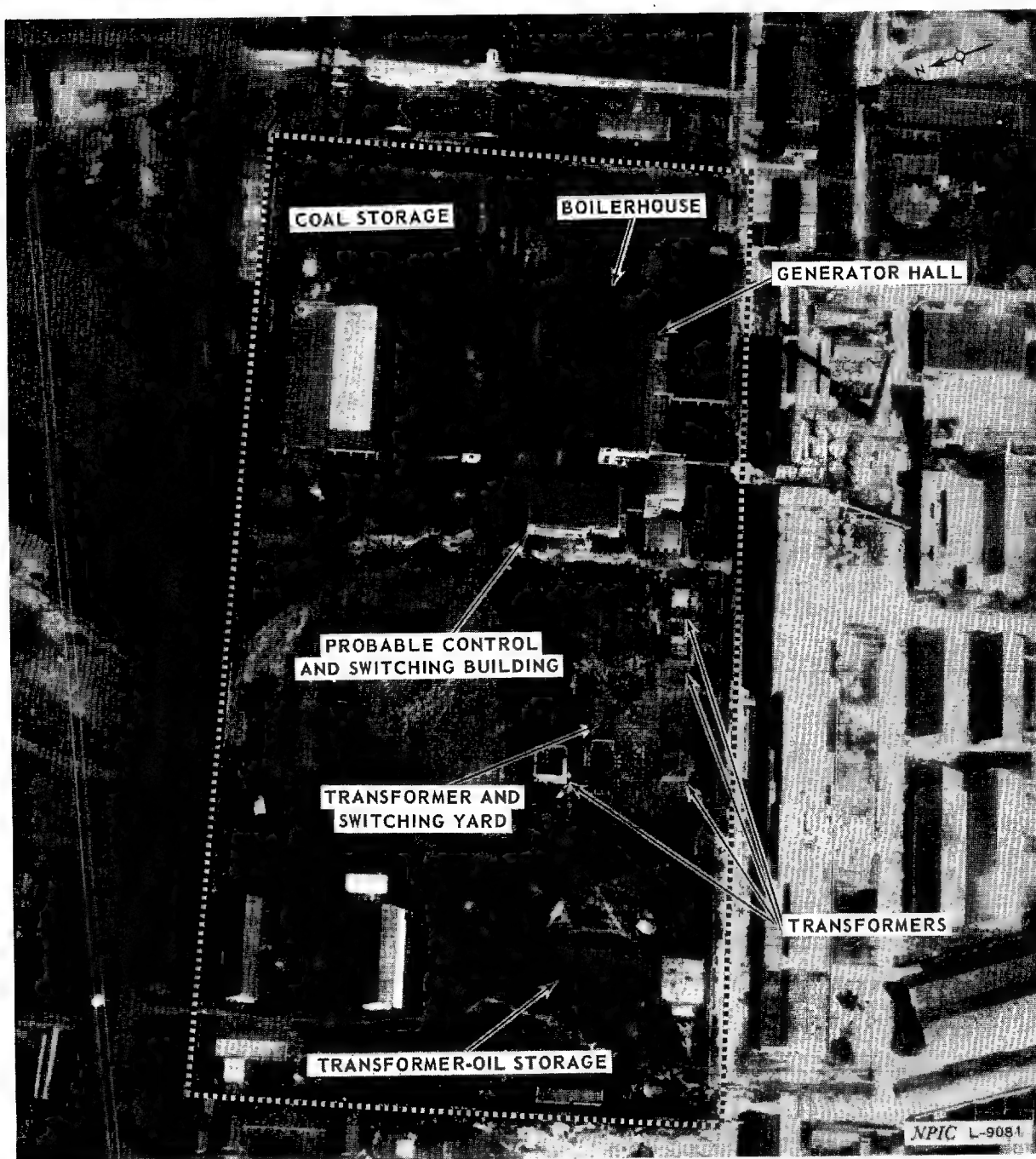
SECRET

25X16

WJ440550  
UTM COORDINATES

VIET TRI THERMAL ELECTRIC POWERPLANT

21-18-00N 105-25-20E  
GEOGRAPHIC COORDINATES



A-35

SECRET



SECRET

25X1C

NO FOREIGN DISSEM

25X1A

BE NUMBER

WJ104757  
UTM COORDINATES

21-29-05N 105-06-00E  
GEOGRAPHIC COORDINATES

NAME: PHU THO (POSSIBLE) THERMAL ELECTRIC POWERPLANT THO KHOI

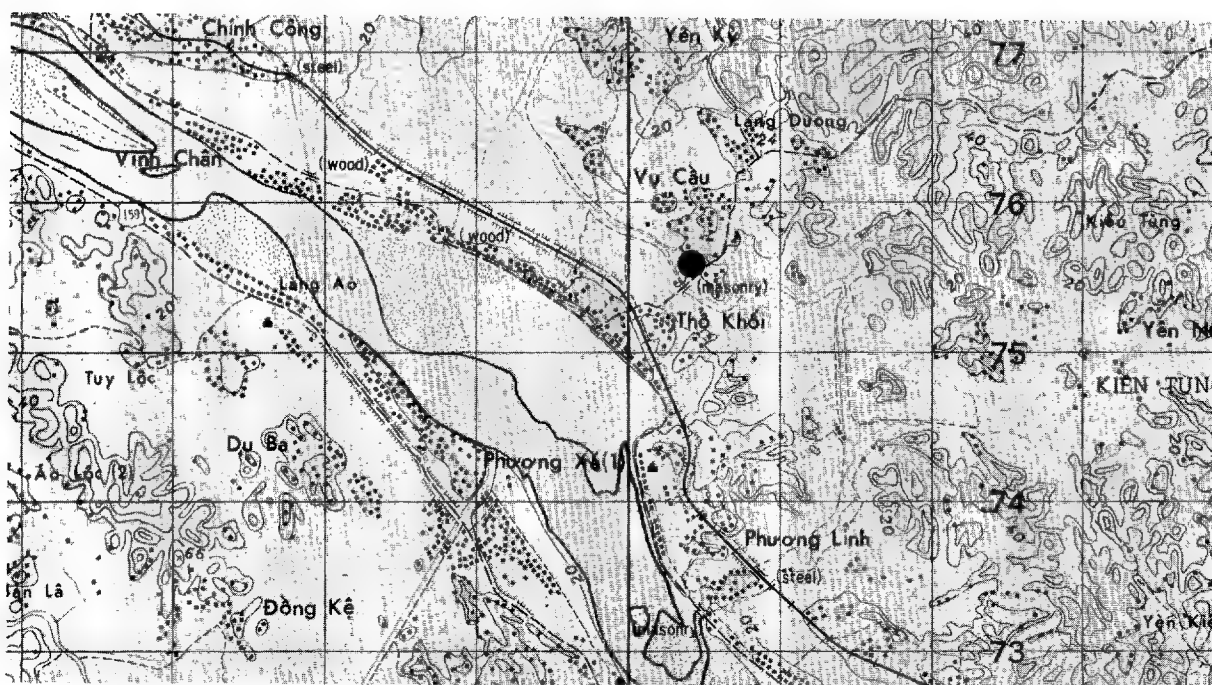
LOCATION: 0.3 NM NNE OF THO KHOI

DESCRIPTION: THE POWERPLANT CONSISTS OF A SMALL BOILERHOUSE-GENERATOR HALL AND A POSSIBLE SWITCHING YARD. A NEARBY INTAKE CANAL AND PUMPING STATION MAY BE ASSOCIATED WITH THE INSTALLATION. A DISCHARGE CANAL PARALLELS THE INTAKE CANAL.

25X1D

PHOTO REFERENCES:

MAP REFERENCES: AMS SERIES L7014, SHEET 6051-IV, 1ST ED, 1965 (U)

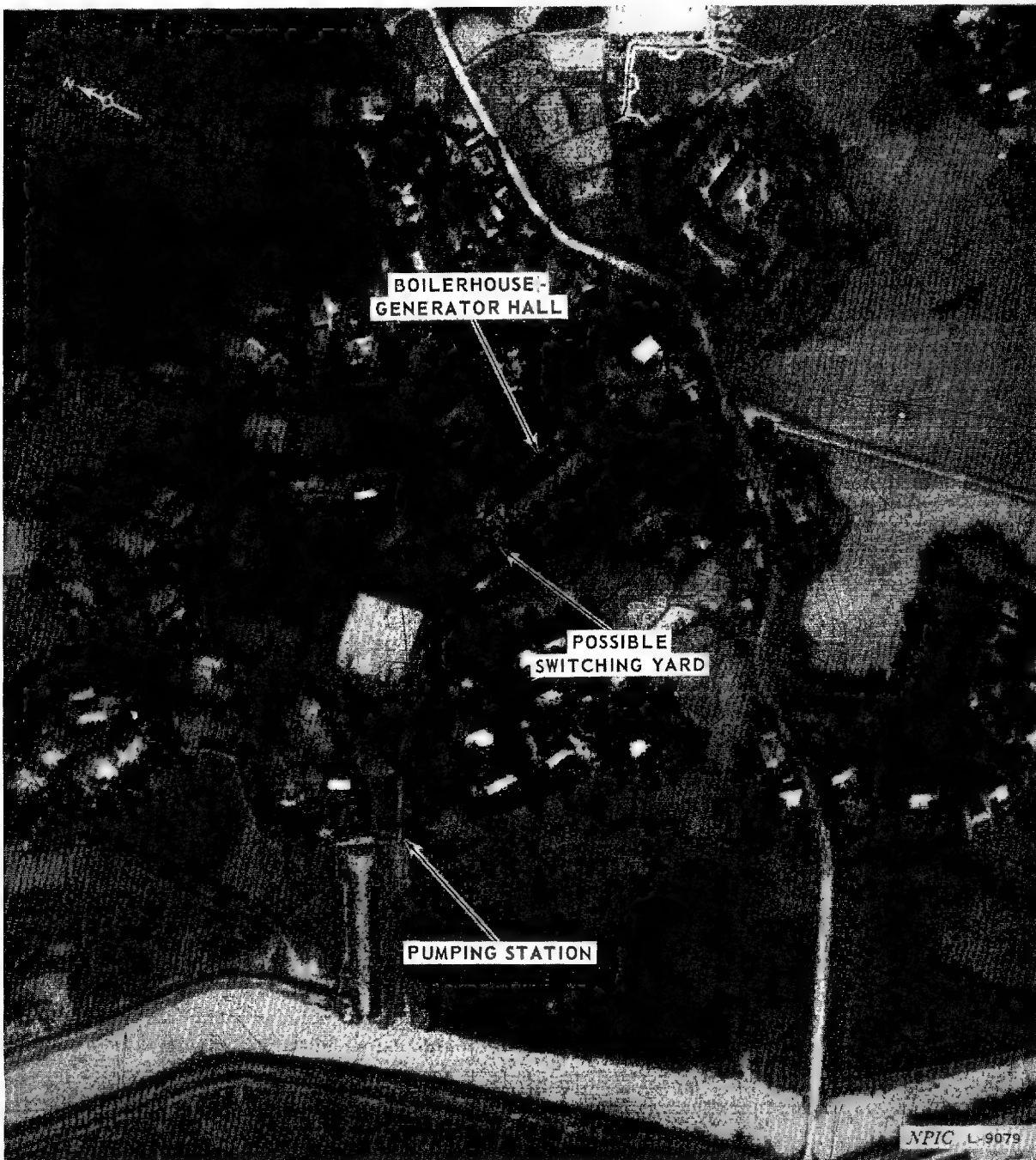


SECRET

25X1C

NO FOREIGN DISSEM

PHU THO (POSSIBLE) THERMAL ELECTRIC POWERPLANT THO KHOI  
WJ104757 21-29-05N 105-06-00E  
UTM COORDINATES GEOGRAPHIC COORDINATES



B

# **SECTION B**

## **HYDROELECTRIC POWERPLANTS**

**SECTION B**  
**Hydroelectric Powerplants**

Only three hydroelectric powerplants have been photographically identified in North Vietnam. One of these is still under construction and the other two are of low capacity, producing power only for local consumption. The powerplant under construction at Lang Chi is planned to have the highest hydroelectric capacity in North Vietnam, a reported 112,500 kw, and will be connected into the national electric power grid system.

The basic components of a hydroelectric powerplant are a forebay, a dam, a generator hall, a transforming facility, a spillway and a tail race.

Reportedly, the North Vietnamese are constructing a number of low head hydroelectric powerplants to diversify and improve their power capacity. In response to this information, 26 installations have been observed which present the same configuration as a low head powerplant.



25X1B

**TABLE OF CONTENTS SECTION 8**  
**Hydroelectric Powerplants**

MAP KEY	INSTALLATION NAME	UTM COORDINATES	MAP SHEET	GEOGRAPHIC COORDINATES	PAGE
1	Ban Thach	WH556010	6148-IV	195421N 1053152E	4
2	Cao Bang	X 315090	6254-II	224105N 1061652E	6
3	Lang Chi (U/C)	WK031046	6051-III	214447N 1050137E	8

SECRET

25X1C

R-146/67

### HYDROELECTRIC POWERPLANTS



SECRET



SECRET

25X1G

R-146/67

25X1A

BE NUMBER

WH556010  
UTM COORDINATES

19-54-21N 105-31-52E  
GEOGRAPHIC COORDINATES

NAME: BAN THACH HYDROELECTRIC POWERPLANT

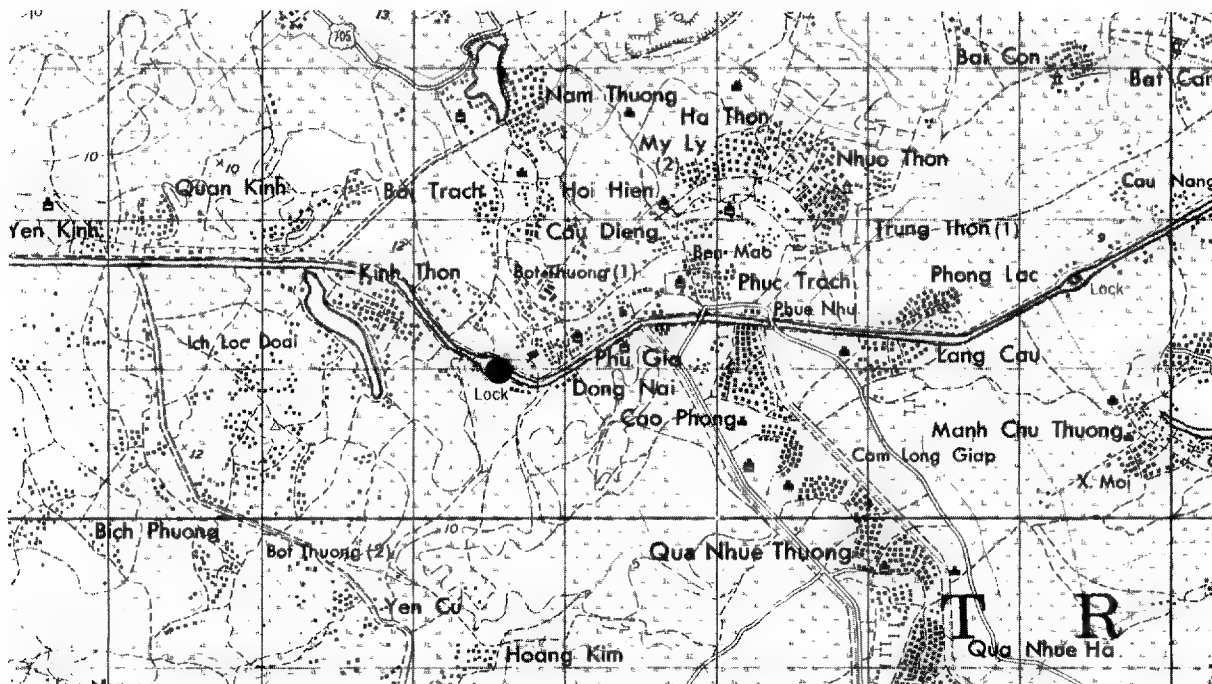
LOCATION: 14.1 NM NW OF THANH HOA ON THE SONG CHU (CANAL)

DESCRIPTION: THE POWERPLANT CONSISTS OF A GRAVITY CREST CONTROL DAM, A GENERATOR HALL, AND A SWITCHING YARD. BOTH THE SWITCHING YARD AND A NAVIGATION LOCK ADJACENT TO THE DAM HAVE SUSTAINED STRUCTURAL DAMAGE.

25X1D

PHOTO REFERENCES:

MAP REFERENCES: AMS SERIES L7014, SHEET 6148-IV, 1ST ED, 1965(U)  
AMS SERIES JOG(A) 1501, SHEET NE 48-3, 1ST ED, 1965 (U)



B-4

SECRET

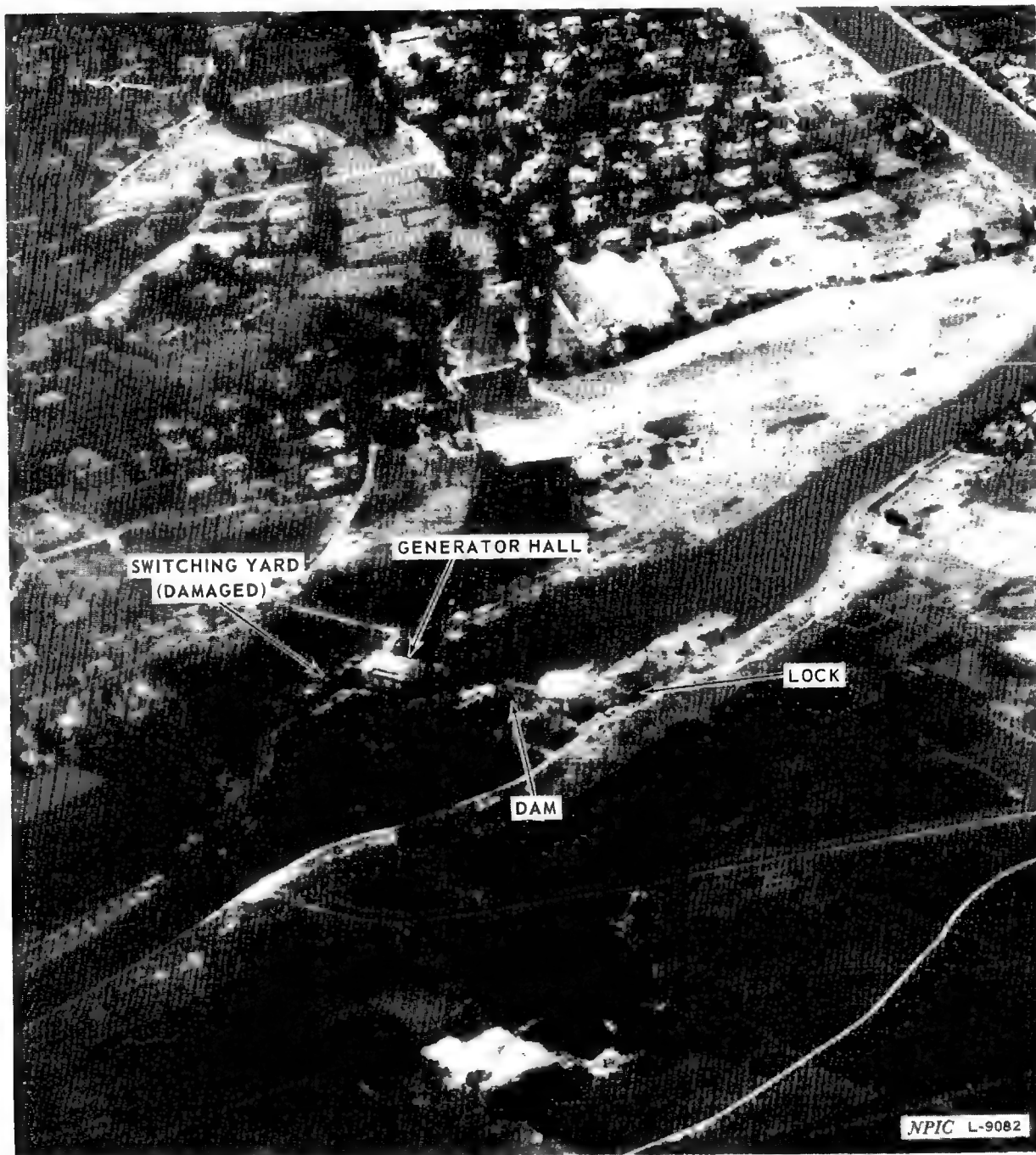
SECRET

25X1G

WH556010  
UTM COORDINATES

BAN THACH HYDROELECTRIC POWERPLANT

19-54-21N 105-31-52E  
GEOGRAPHIC COORDINATES



B-5

SECRET

SECRET

25X1D

R-146/67

BE NUMBER	UTM COORDINATES	GEOGRAPHIC COORDINATES
	XL315090	22-41-05N 106-16-52E

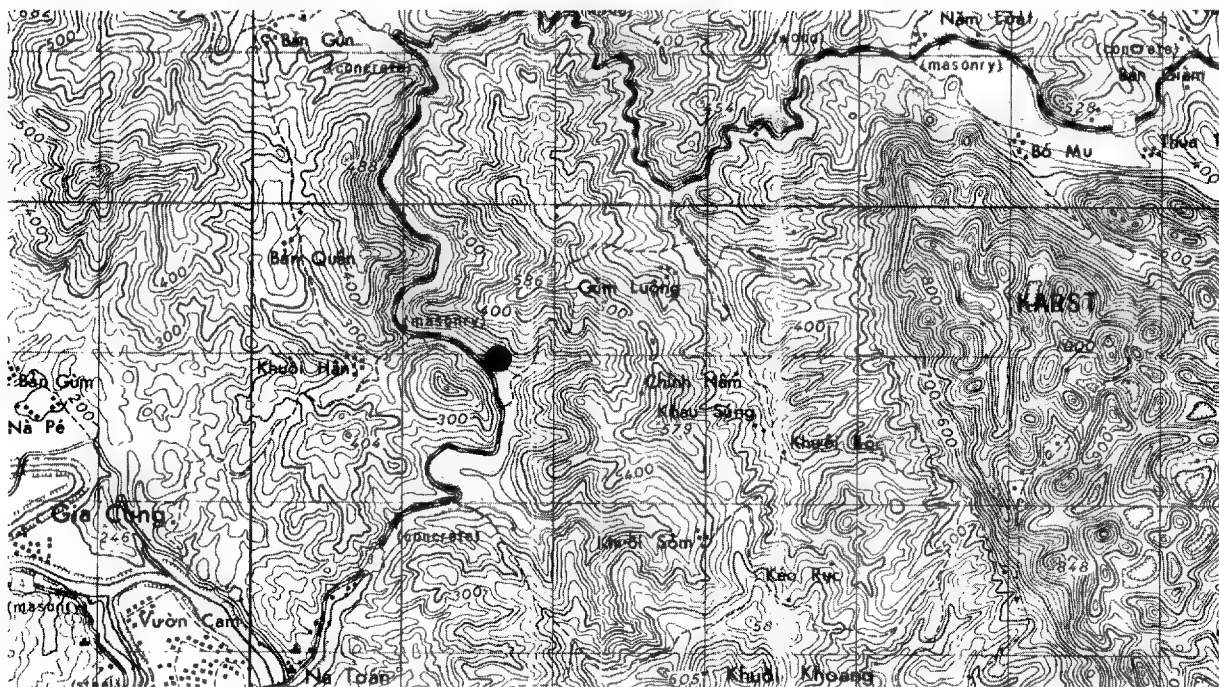
NAME: CAO BANG HYDROELECTRIC POWERPLANT

LOCATION: 1.9 NM NNE OF CAO BANG ON NATIONAL ROUTE 3

DESCRIPTION: THE INSTALLATION CONSISTS OF A GENERATOR HALL, A SUSPECT SWITCHING YARD, A POSSIBLE SURGE TANK, 1 OR 2 PENSTOCKS, A 2.9-KM LONG DIVERSION CANAL AND A CONCRETE DIVERSION DAM.

PHOTO REFERENCES:

MAP REFERENCES: AMS SERIES L7014, SHEET 6254-II, 1ST ED, 1965 (U)  
AMS SERIES JOG(G) 1501, SHEET NF 48-7, 1ST ED, 1965 (U)



B-6

SECRET

25X1D

XL315090  
UTM COORDINATES

CAO BANG HYDROELECTRIC POWERPLANT

22 -41 -05N 106-16-52E  
GEOGRAPHIC COORDINATES



B-7

NO FOREIGN DISSEM [REDACTED]

25X1A

[REDACTED]  
BE NUMBER

WK031046  
UTM COORDINATES

21-44-47N 105-01-37E  
GEOGRAPHIC COORDINATES

NAME: LANG CHI HYDROELECTRIC POWERPLANT THAC BA (UNDER CONSTRUCTION)

LOCATION: 23 NM NNW OF PHU THO

DESCRIPTION: NO NEW SIGNIFICANT CONSTRUCTION HAS BEEN OBSERVED SINCE [REDACTED]  
[REDACTED] COMPONENTS UNDER CONSTRUCTION INCLUDE AN EARTH DAM, A GENERATOR HALL WITH 3 GENERATORS, AND A 3-FLUME SPILLWAY. THE RIVER CHANNEL FLOW HAS NOT YET BEEN DAMMED.

25X1D

25X1D

25X1D

PHOTO REFERENCES: [REDACTED]

MAP REFERENCES: AMS SERIES L7014, SHEET 6052-III, 1ST ED, 1965 (U)  
AMS SERIES JOG(G) 1501, SHEET NF 48-11, 1ST ED, 1965 (U)



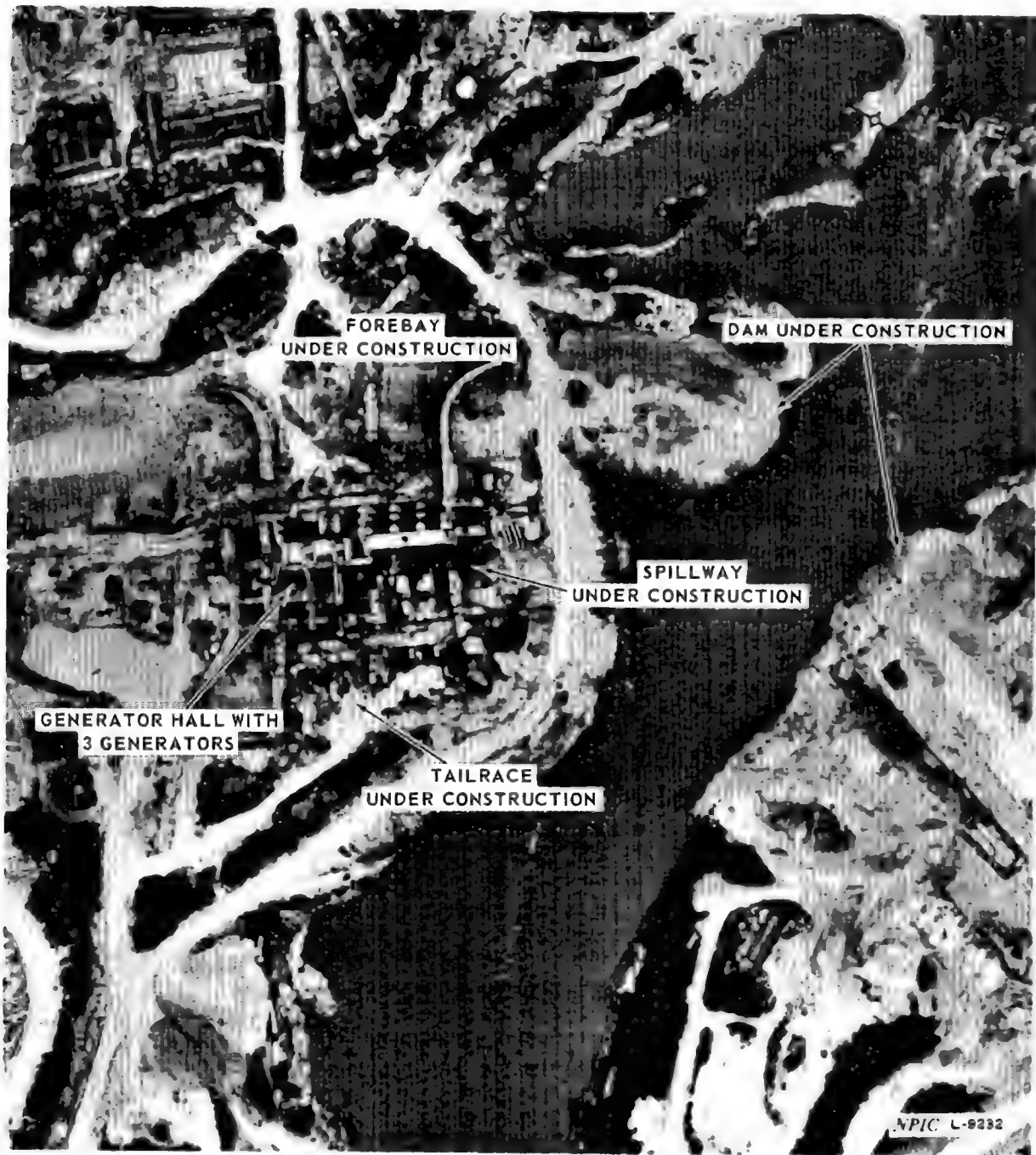
B-8

~~SECRET~~

NO FOREIGN DISSEM [REDACTED]



LANG CHI HYDROELECTRIC POWERPLANT THAC BA (UNDER CONSTRUCTION)  
WK031046  
UTM COORDINATES  
21-44-47N 105-01-37E  
GEOGRAPHIC COORDINATES





C

# SECTION C

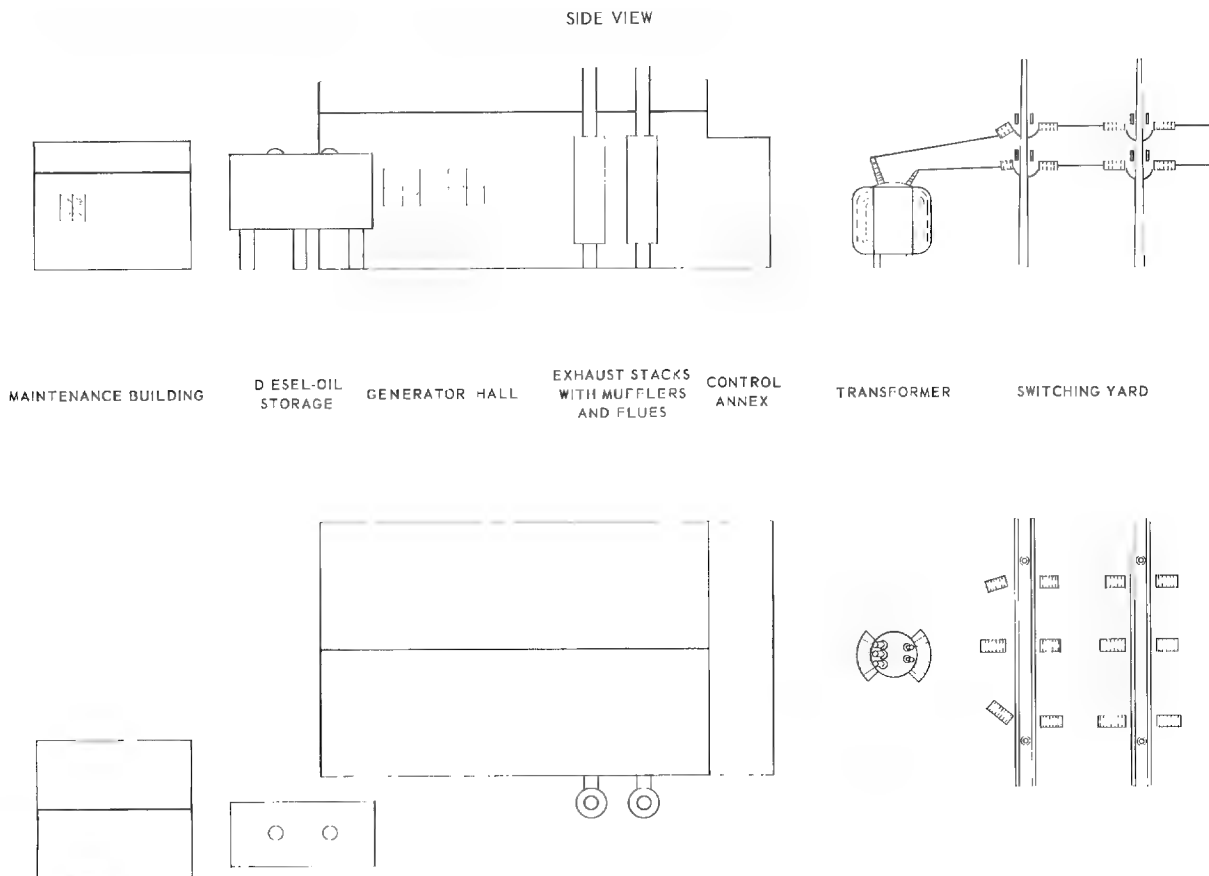
## DIESEL - ELECTRIC POWERPLANTS

### SECTION C Diesel-Electric Powerplants

North Vietnam's diesel-electric powerplants (usually referred to as internal combustion powerplants) primarily produce power for immediate industrial areas.

The first type of installation identified consists of a single-story wood frame structure with an open or enclosed transforming/switching facility, and an exhaust stack that is generally, but not always, apparent.

This section contains only permanent-type installations, although the smaller transportable generators could be utilized to replace or supplement these installations. An example of a small, covered generator is included in the miscellaneous section.



NPIC L 9163

C-1

**TABLE OF CONTENTS SECTION C**  
**Diesel-Electric Powerplants**

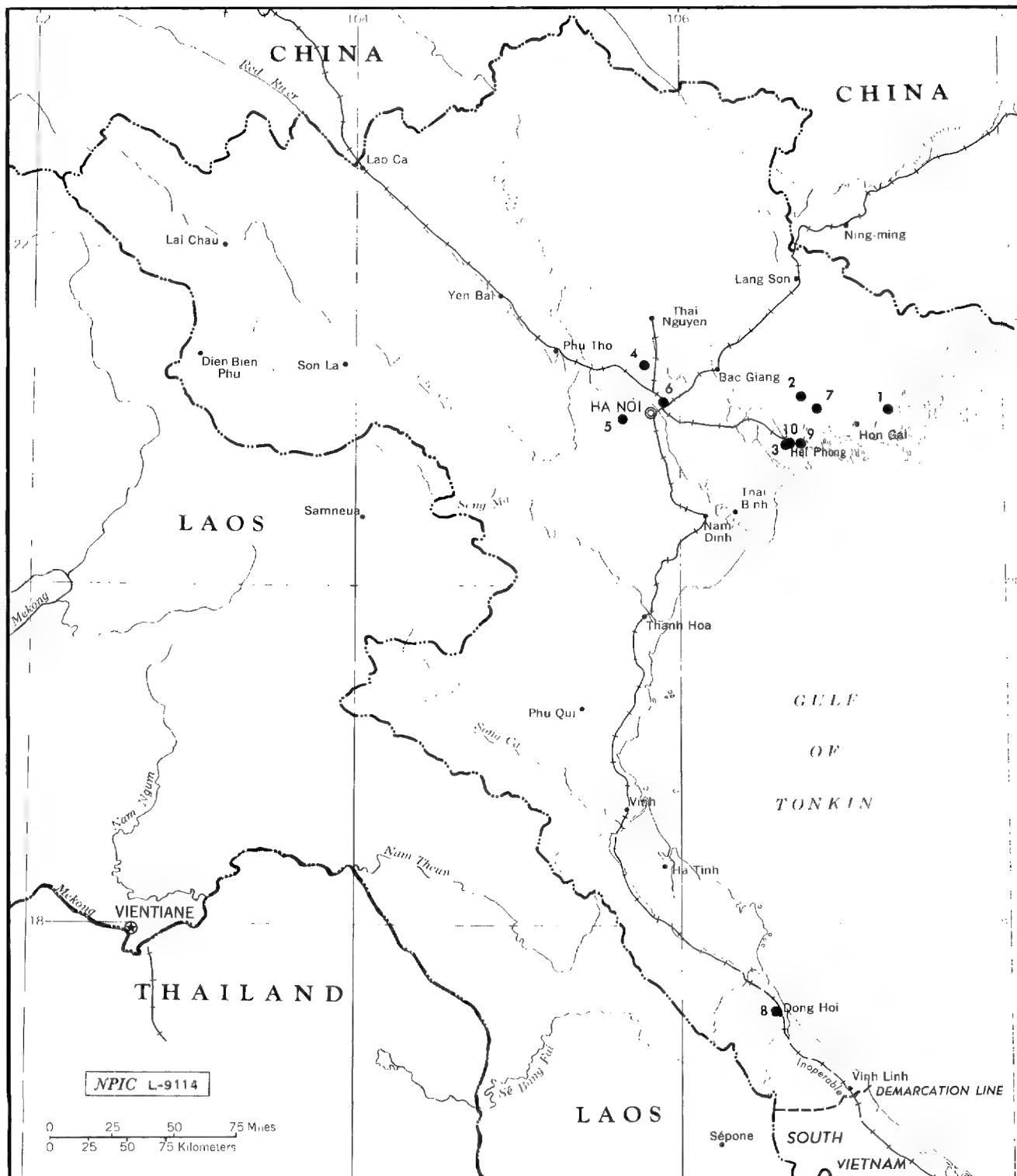
MAP KEY	INSTALLATION NAME	UTM COORDINATES	MAP SHEET	GEOGRAPHIC COORDINATES	PAGE
1	Cam Pha	YJ399258	6451-II	210110N 1071830E	4
2	Vang Danh North	XJ857373	6451-II	210745N 1064615E	6
3	Hai Phong Aux 3 (Probable)	XJ744072	6350-IV	205132N 1064037E	8
4	Lang Truoc	WJ902506	6151-I	211523N 1055214E	10
5	Ha Noi	WJ820218	6150-I	205948N 1054711E	12
6	Thanh Am (Possible)	WJ948302	6151-II	210419N 1055446E	14
7	Vang Danh (Probable)	XJ872364	6351-II	210718N 1064815E	16
8	Dong Hoi (Suspect)	XJ727314	6343-IV	172748N 1063737E	18
9	Hai Phong Aux 2 (Probable)	XJ780072	6350-IV	205131N 1064239E	20
10	Hai Phong Aux 1 (Probable)	XJ762072	6350-IV	205132N 1064137E	22

SECRET

25X1C

R-146/67

## DIESEL-ELECTRIC POWERPLANTS



C-3

SECRET

25X1C

SECRET

25X1C

R-146/67

25X1A

BE NUMBER

YJ399258  
UTM COORDINATES

21-01-10N 107-18-30E  
GEOGRAPHIC COORDINATES

NAME: CAM PHA DIESEL-ELECTRIC POWERPLANT

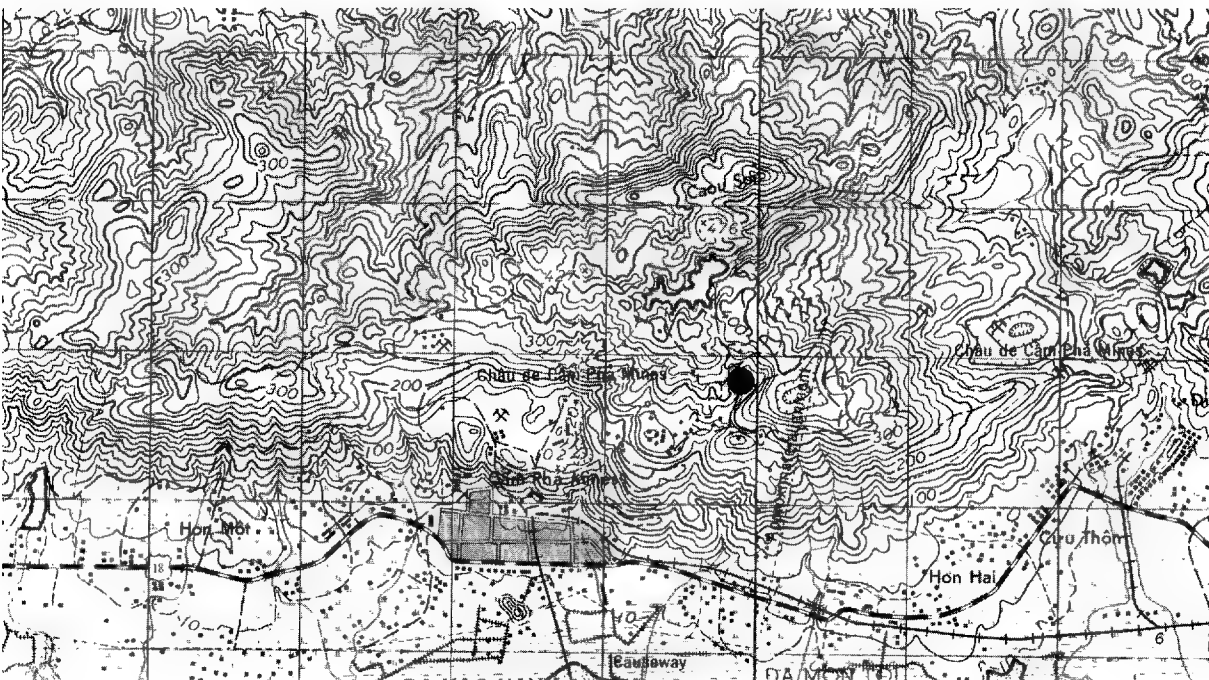
LOCATION: 0.9 NM NW OF CAM PHA IN THE AREA OF THE CAM PHA MINES

DESCRIPTION: THE POWERPLANT CONSISTS OF A DIESEL GENERATOR HALL, A  
REVETTED, COVERED TRANSFORMER, AND A REVETTED SWITCHING YARD.

25X1D

PHOTO REFERENCES:

MAP REFERENCES: AMS SERIES L7014, SHEET 6451-II, 1ST ED, 1965 (U)  
AMS SERIES JOG(A) 1501, SHEET NF 48-12, 1ST ED, 1965 (U)



C-1

SECRET

25X1C

SECRET

25X1C

YJ399258  
UTM COORDINATES

CAM PHA DIESEL-ELECTRIC POWERPLANT

21-01-10N 107-18-30E  
GEOGRAPHIC COORDINATES



C-5

SECRET

25X1C



SECRET

25X1C

R-146/67

25X1A

BE NUMBER

XJ857373  
UTM COORDINATES

21-07-45N 106-46-15E  
GEOGRAPHIC COORDINATES

NAME: VANG DANH DIESEL-ELECTRIC POWERPLANT NORTH

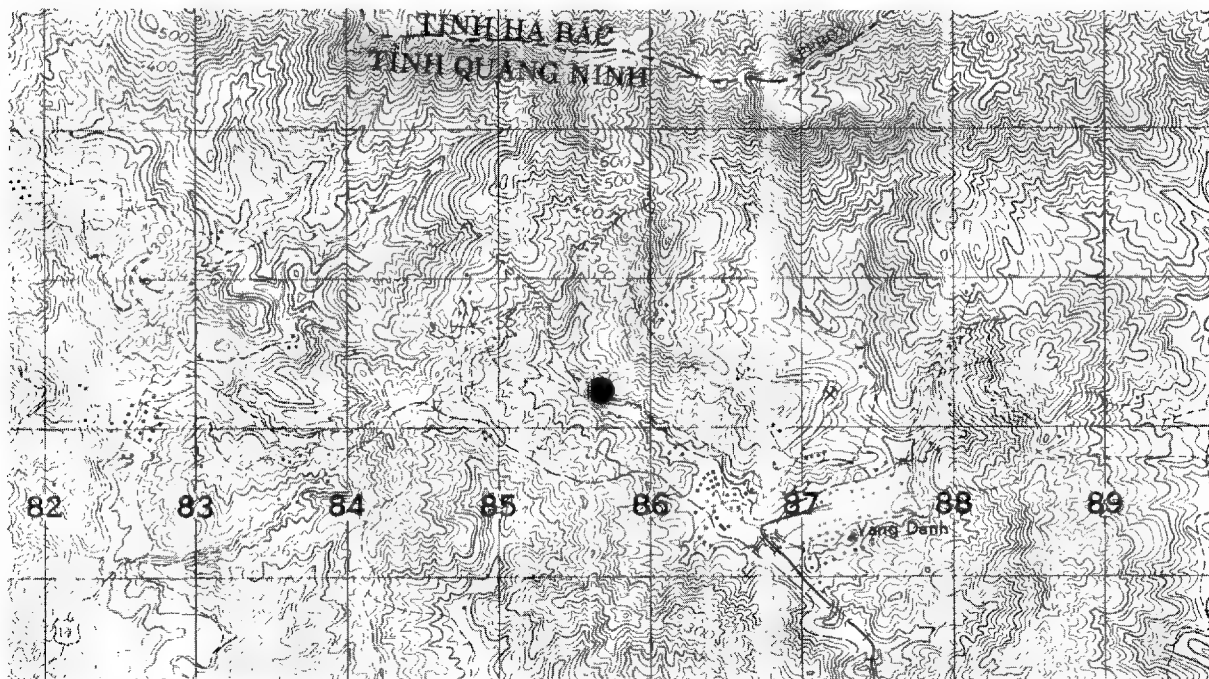
LOCATION: 1 NM WNW OF VANG DANH AND 5.8 NM NORTH OF UONG BI

DESCRIPTION: THE POWERPLANT CONSISTS OF A DIESEL GENERATOR HALL, A  
REVVETTED TRANSFORMER, AND A POL TANK.

25X1D

PHOTO REFERENCES:

MAP REFERENCES: AMS SERIES L7014, SHEET 6351-11, 1ST ED, 1965 (U)  
AMS SERIES JOC (G) 1501, SHEET NF 48-12, 1ST ED, 1965 (U)



C-6

SECRET

25X1C

VANG DANH DIESEL-ELECTRIC POWERPLANT NORTH  
XJ857373 21-07-45N 106-46-15E  
UTM COORDINATES GEOGRAPHIC COORDINATES



C-7

25X1A

BE NUMBER	UTM COORDINATES	GEOGRAPHIC COORDINATES
[REDACTED]	XJ744072	20-51-32N 106-40-37E

NAME: HAI PHONG PROBABLE DIESEL-ELECTRIC POWERPLANT AUX 3

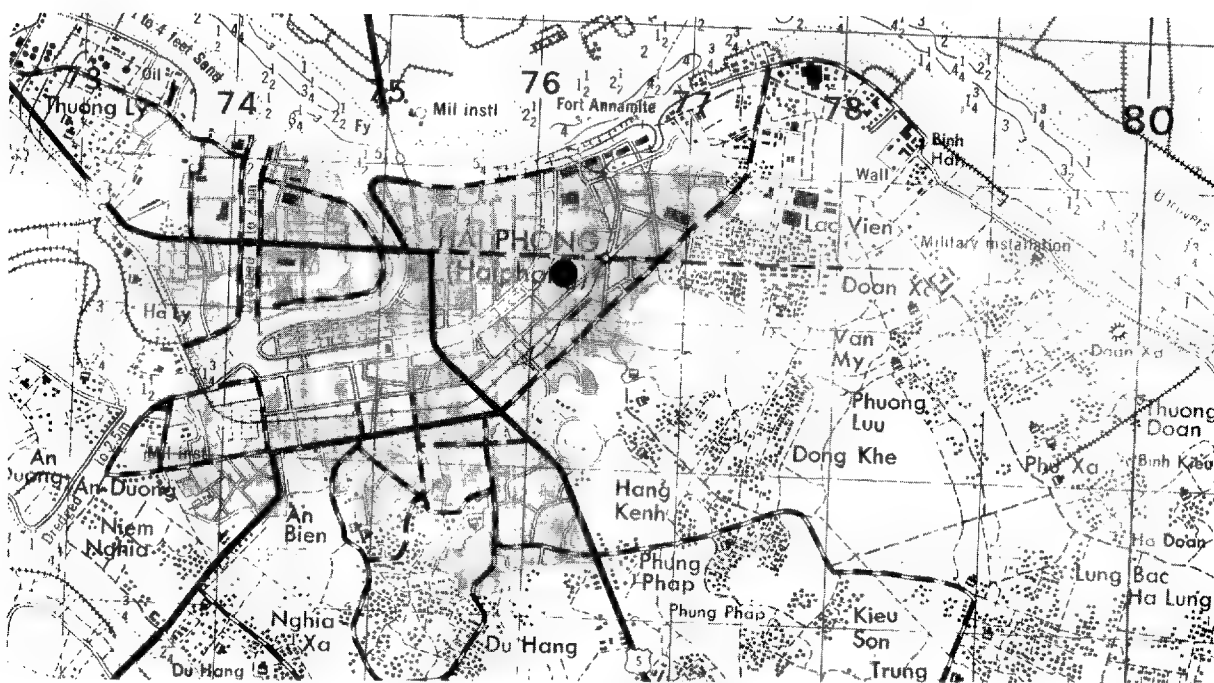
LOCATION: 3.9 NM NW OF CAT BI AIRFIELD AND 0.9 NM NNW OF HAI PHONG RAILYARD

DESCRIPTION: INSTALLATION CONSISTS OF A REVETTED PROBABLE GENERATOR HALL WITH 2 EXHAUST MUFFLERS, A COOLING POND AND 3 PROBABLE POL STORAGE BUNKERS.

25X1D

PHOTO REFERENCES: [REDACTED]

MAP REFERENCES: AMS SERIES L7014, SHEET 6350-IV, 1ST ED, 1965 (U)  
AMS SERIES JOG(G) 1501, SHEET NF 48-16, 1ST ED, 1965 (U)



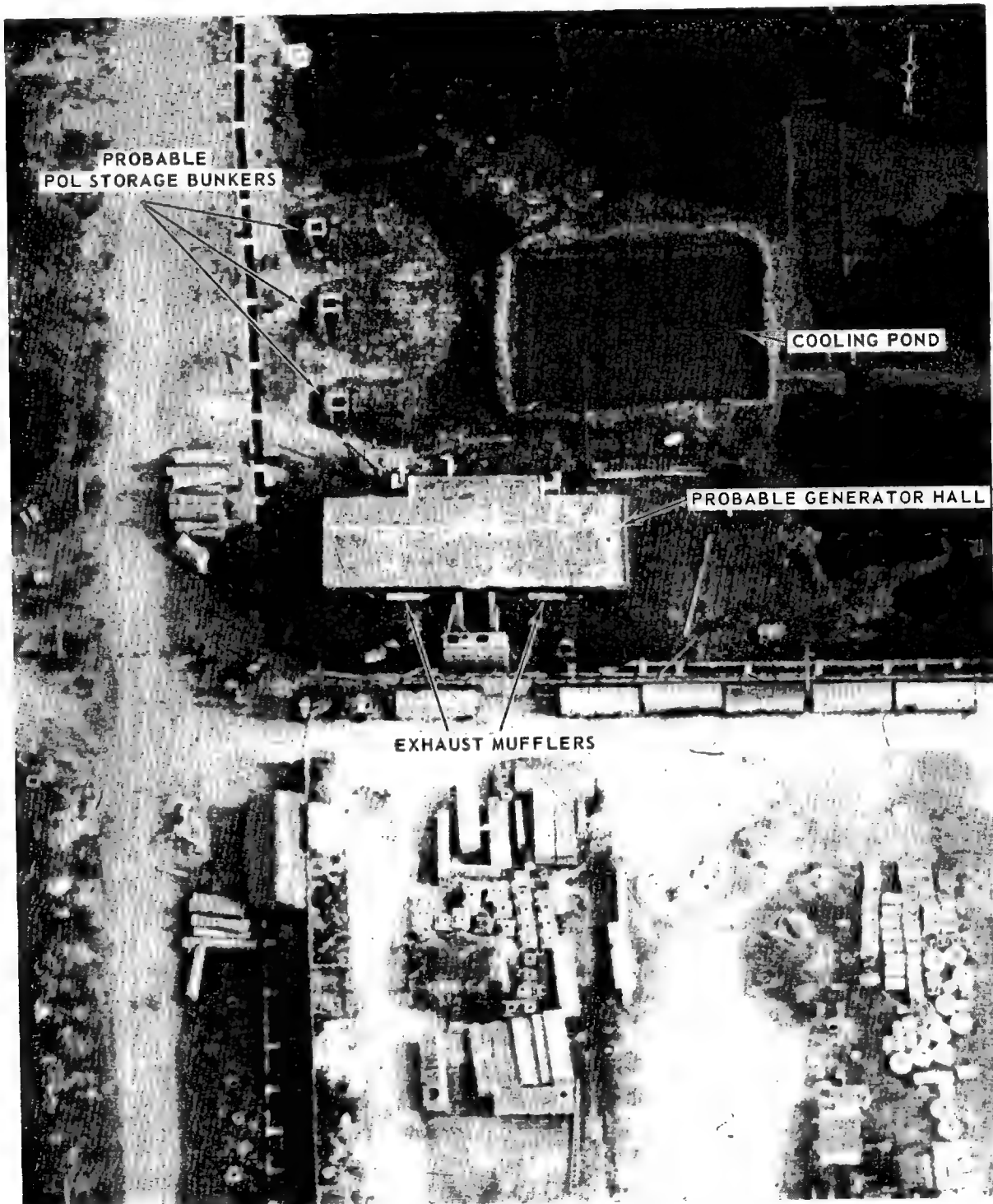
C-8

SECRET

25X1C

R-146/67

HAI PHONG PROBABLE DIESEL-ELECTRIC POWERPLANT AUX 3  
XJ744072 20-51-32N 106-40-37E  
UTM COORDINATES GEOGRAPHIC COORDINATES



C-9

SECRET

25X1C

SECRET

25X1C

R-146/67

25X1A

BE NUMBER

WJ902506  
UTM COORDINATES

21-15-23N 105-52-14E  
GEOGRAPHIC COORDINATES

NAME: LANG TRUOC DIESEL-ELECTRIC POWERPLANT

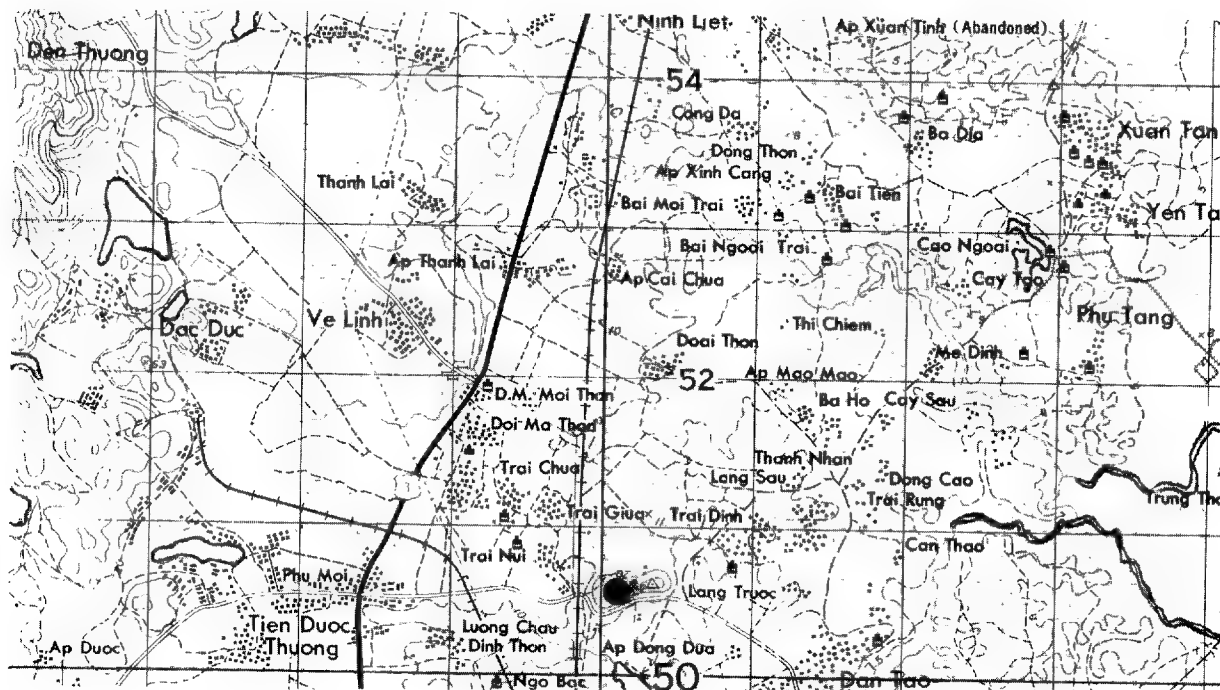
LOCATION: 4.0 NM NE OF PHUC YEN AIRFIELD WITHIN A SECURED COMMUNICATIONS FACILITY

DESCRIPTION: THE POWERPLANT CONSISTS OF A 2-STORY CONCRETE GENERATOR HALL, A PROBABLE TRANSFORMER ANNEX, AND AN EXHAUST STACK WITH A PROBABLE MUFFLER. THE INSTALLATION SUPPLIES POWER TO THE LANG TRUOC COMMUNICATIONS FACILITY.

25X1D

PHOTO REFERENCES:

MAP REFERENCES: AMS SERIES L7014, SHEET 6151-I, 1ST ED, 1965 (U)  
AMS SERIES JOG(G) 1501, SHEET NF 48-11, 1ST ED, 1965 (U)



C-10

SECRET

25X1C



SECRET

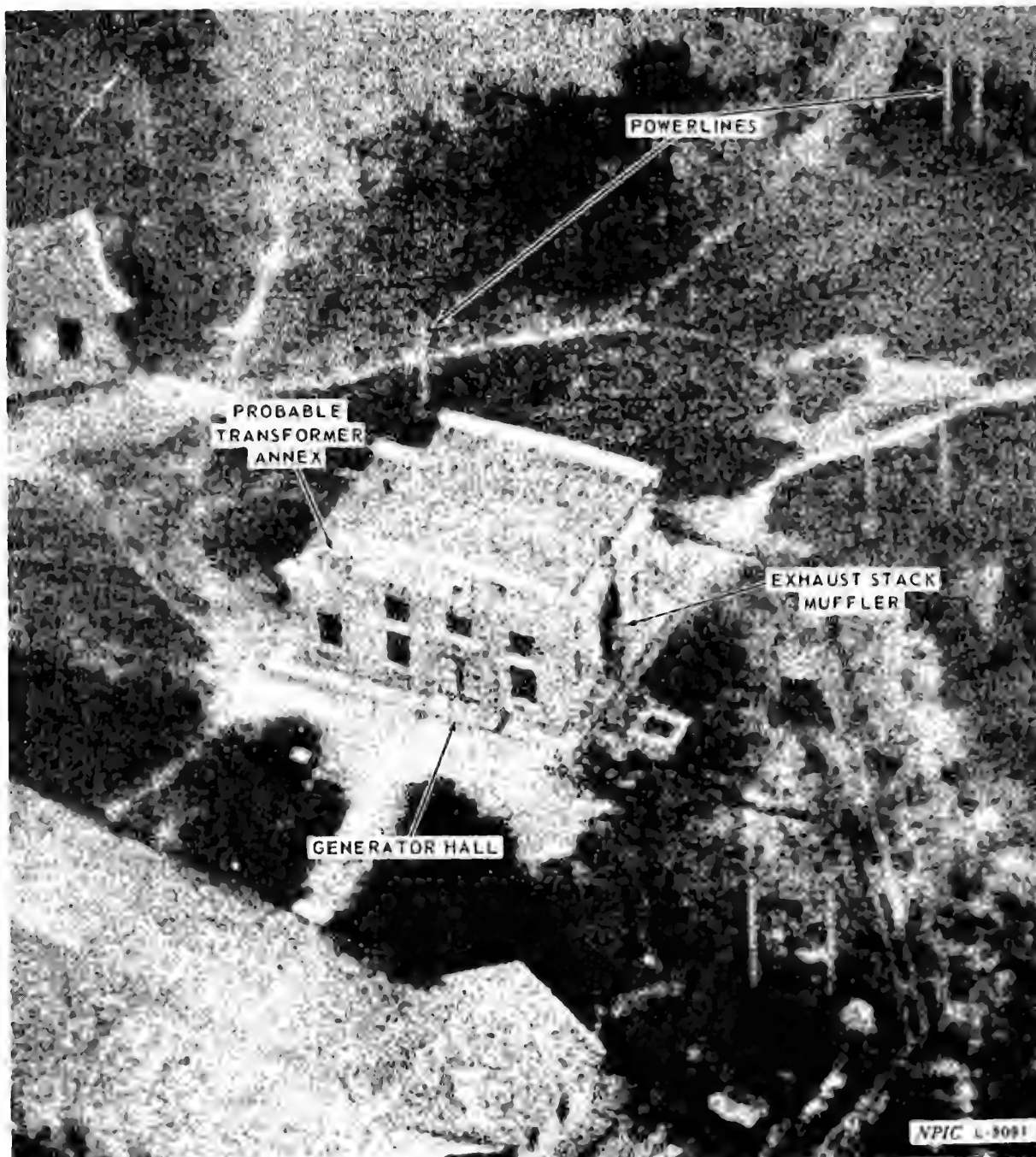
25X1D

R-146/67

WJ902506  
UTM COORDINATES

LANG TRUOC DIESEL-ELECTRIC POWERPLANT

21-15-23N 105-52-14E  
GEOGRAPHIC COORDINATES



C-11

SECRET



SECRET

25X1C

R-146/67

25X1A

BE NUMBER

WJ820218

UTM COORDINATES

20-59-48N 105-47-11E

GEOGRAPHIC COORDINATES

NAME: HA NOI DIESEL-ELECTRIC POWERPLANT ME TRI

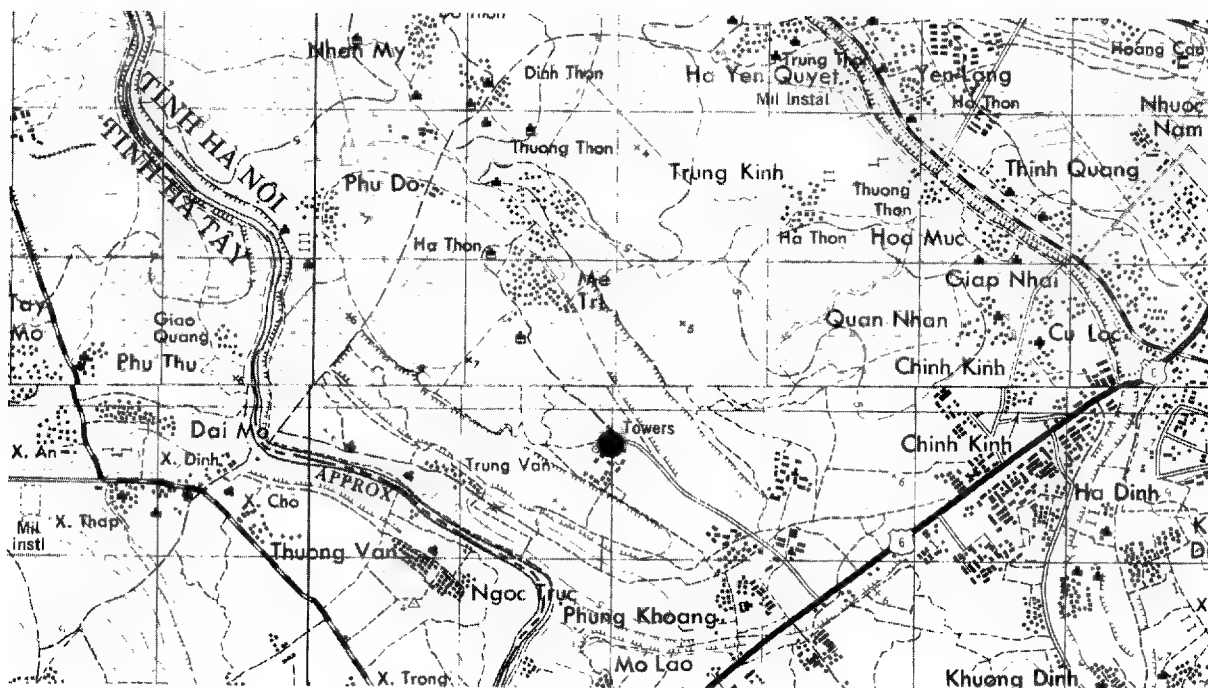
LOCATION: 2.7 NM WEST OF HANOI/BAC MAI AIRFIELD, WITHIN THE SECURED ME TRI COMMUNICATIONS FACILITY

DESCRIPTION: THE POWERPLANT CONSISTS OF A DIESEL GENERATOR HALL, 2 POL STORAGE TANKS, AND 3 ASSOCIATED BUILDINGS. THIS INSTALLATION SUPPLIES ALL THE POWER FOR THE COMMUNICATIONS FACILITY.

25X1D

PHOTO REFERENCES:

MAP REFERENCES: AMS SERIES L7014, SHEET 6150-1, 1ST ED, 1965 (U)  
AMS SERIES JOG(G) 1501, SHEET NF 48-15, 1ST ED, 1965 (U)



C 12

SECRET

25X1C

SECRET

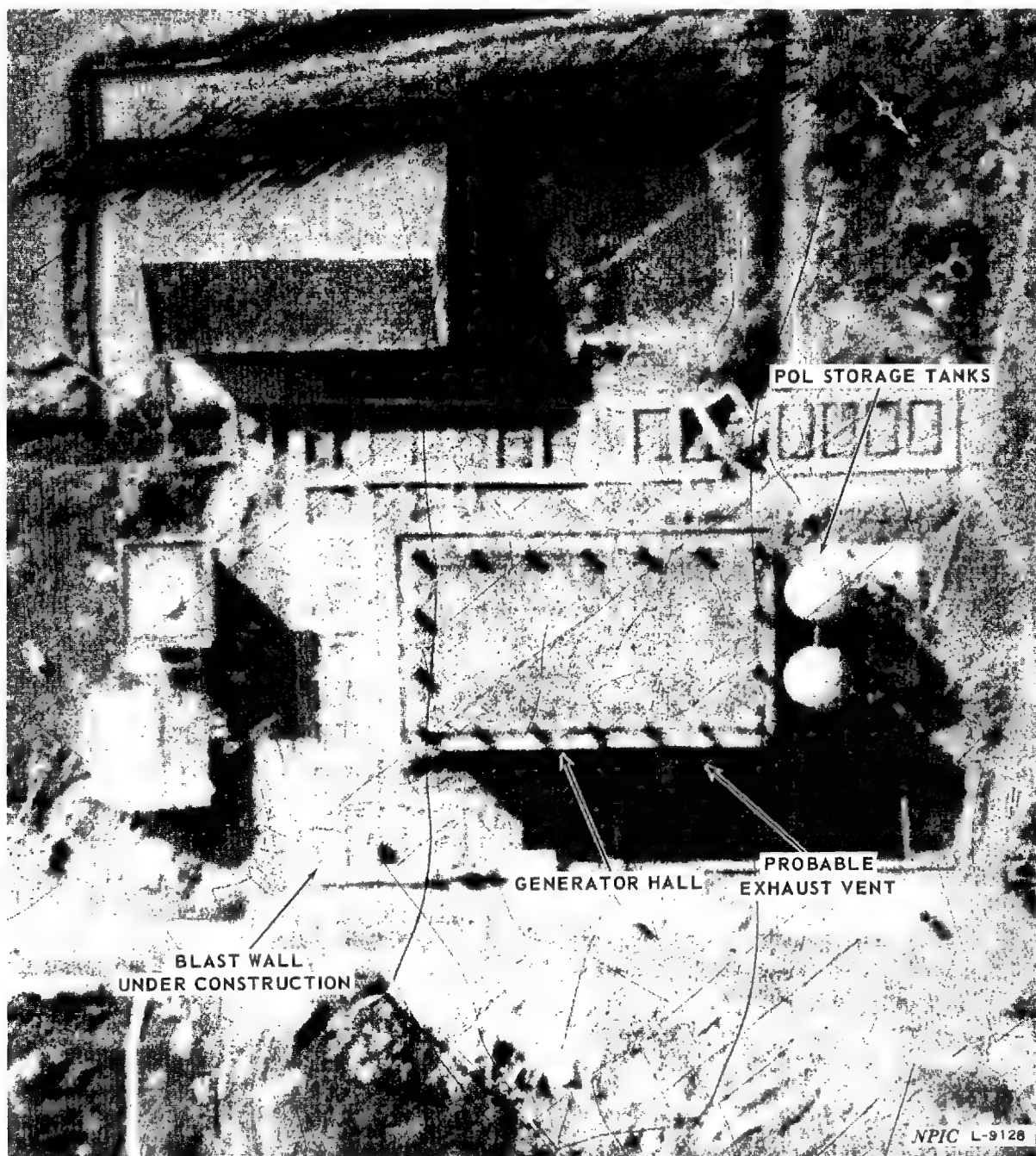
25X1C

R-146/67

WJ820218  
UTM COORDINATES

HA NOI DIESEL-ELECTRIC POWERPLANT ME TRI

20-59-48N 105-47-11E  
GEOGRAPHIC COORDINATES



C-13

SECRET

25X1C

SECRET

25X1C

5-146/67

BE NUMBER	UTM COORDINATES	GEOGRAPHIC COORDINATES
	WJ948302	21-04-19N 105-54-46E

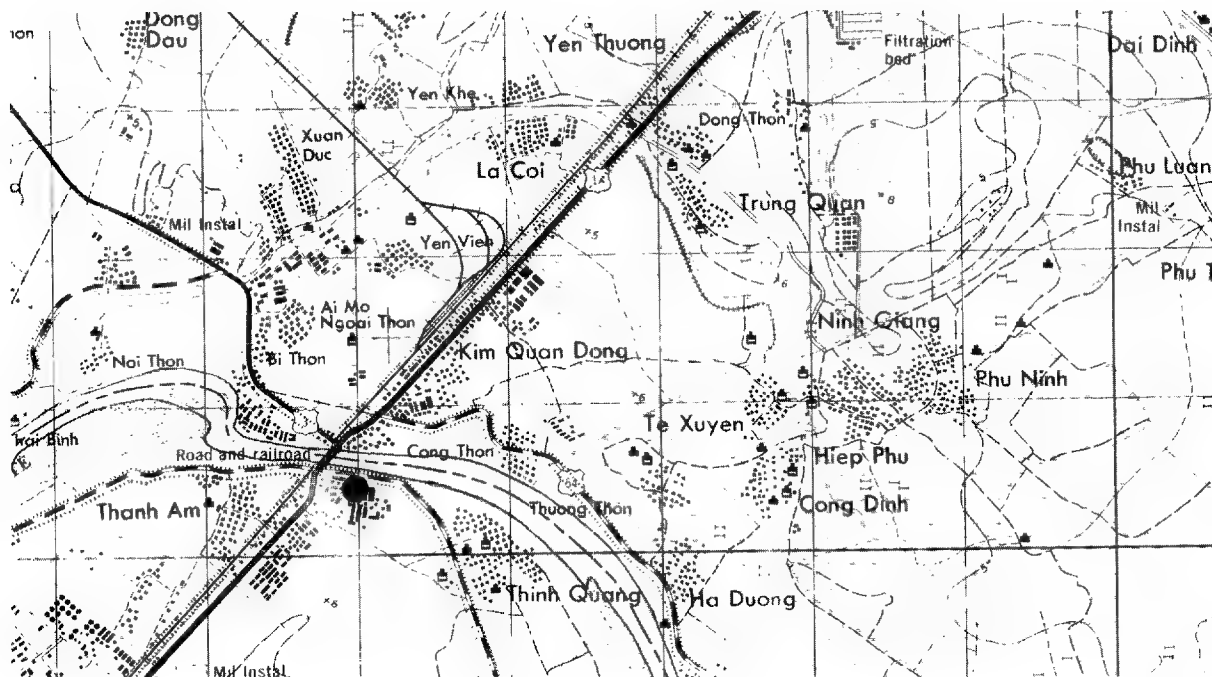
NAME: THANH AM SUSPECT DIESEL-ELECTRIC POWERPLANT

LOCATION: 4.3 NM NNE OF HA NOI

DESCRIPTION: THE SUSPECT POWERPLANT CONSISTS OF A POSSIBLE DIESEL GENERATOR HALL (WITH 2 STACKS) AND A POSSIBLE CONTROL/TRANSFORMER BUILDING.

25X1D PHOTO REFERENCES:

MAP REFERENCES: AMS SERIES L7014, SHEET 6151-II, 1ST ED, 1965 (U)  
AMS SERIES JOG(G) 1501, SHEET NF 48-11, 1ST ED, 1965 (U)



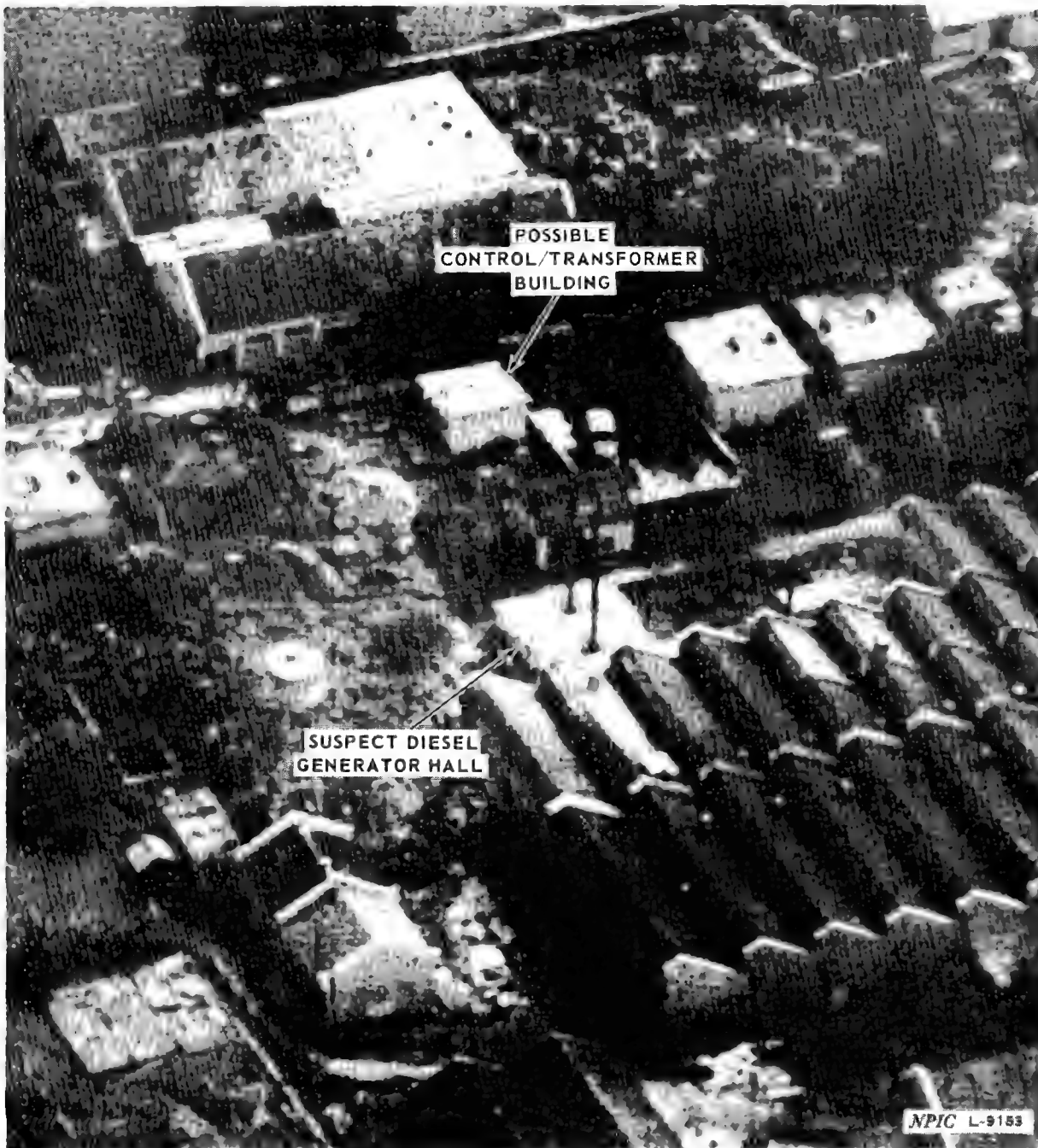
C 14

SECRET

25X1C

WJ948302  
UTM COORDINATES

THANH AM SUSPECT DIESEL-ELECTRIC POWERPLANT  
21-04-19N 105-54-46E  
GEOGRAPHIC COORDINATES



C-15

SECRET

NO FOREIGN DISSEM

BE NUMBER

XJ872364  
UTM COORDINATES

21-07-18N 106-48-15E  
GEOGRAPHIC COORDINATES

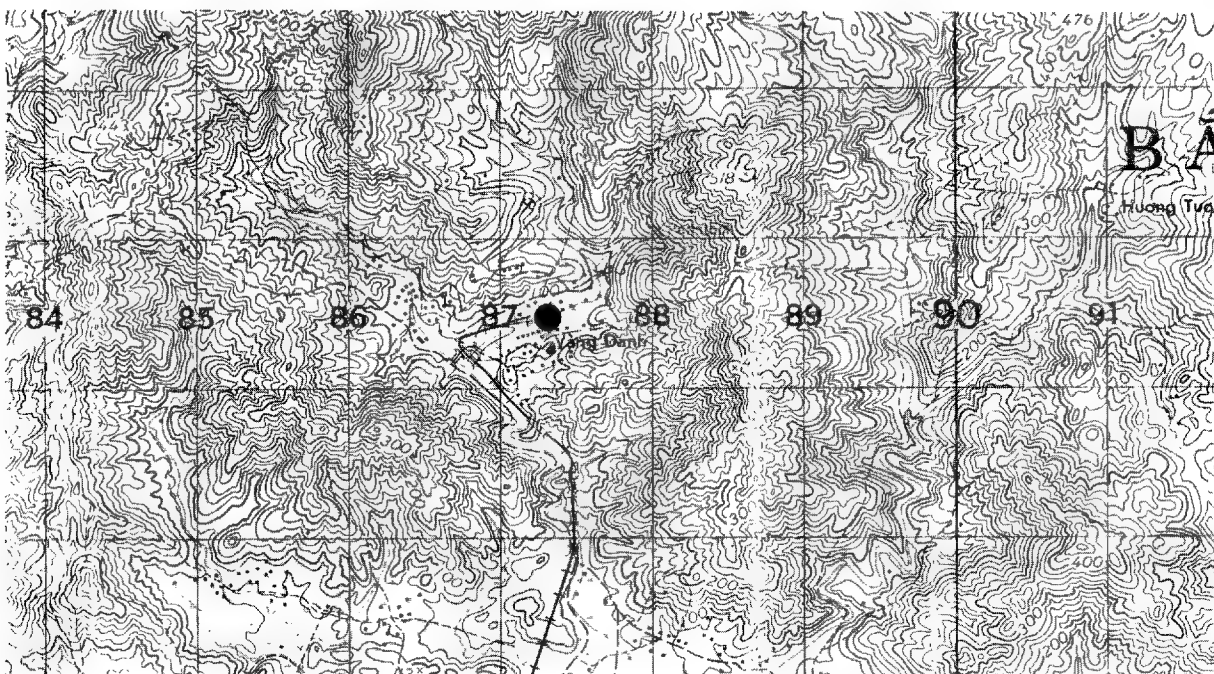
NAME: VANG DANH SUSPECT DIESEL-ELECTRIC POWERPLANT

LOCATION: AT VANG DANH 5.1 NM NORTH OF UONG BI

DESCRIPTION: THE INSTALLATION CONSISTS OF A SUSPECT DIESEL GENERATOR HALL AND A SUSPECT TRANSFORMER ANNEX WITH 3 DIESEL-OIL TANKS LOCATED ON THE ROOF.

25X1D PHOTO REFERENCES:

MAP REFERENCES: AMS SERIES L7014, SHEET 6351-II, 1ST ED, 1965 (U)  
AMS SERIES JOG(G) 1501, SHEET NF 48-12, 1ST ED, 1965 (U)



C-16

SECRET

NO FOREIGN DISSEM



SECRET

25X1G

XJ872364  
UTM COORDINATES

WANG DANH SUSPECT DIESEL-ELECTRIC POWERPLANT

21-07-18N 106-48-15E  
GEOGRAPHIC COORDINATES



C-17

SECRET

25X1G



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© 2006 The Authors

XE727314

17-27-48N 106-37-37E

BE NUMBER

UTM COORDINATES

### GEOGRAPHIC COORDINATES

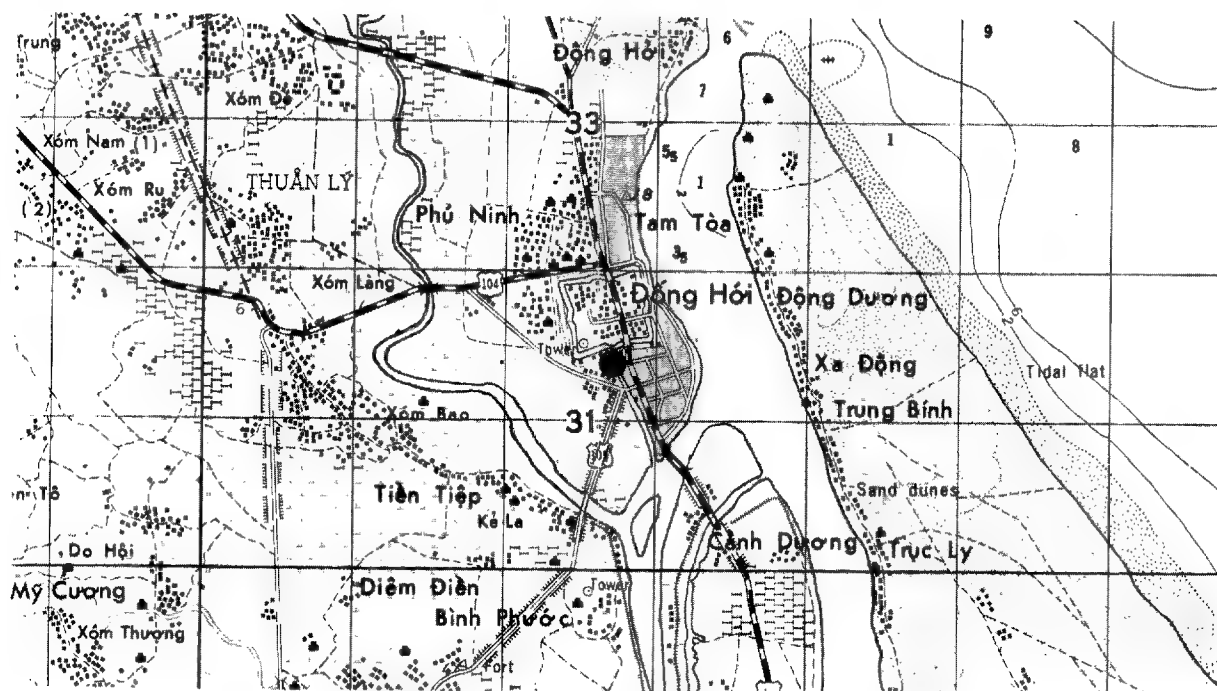
NAME: DONG HOI (SUSPECT) DIESEL/THERMAL ELECTRIC POWERPLANT

LOCATION: 0.2 NM SOUTH OF THE DONG HOI CITADEL.

DESCRIPTION: THE INSTALLATION CONSISTS OF A SUSPECT GENERATOR HALL, A SUSPECT TRANSFORMER, AND AN EXHAUST STACK.

**PHOTO REFERENCES:** [REDACTED]

MAP REFERENCES: AMS SERIES L7014, SHEET 6343-IV, 1ST ED, 1965 (U)  
AMS SERIES JOG(G) 1501, SHEET NE 48-12, 1ST ED, 1965 (U)



C-18

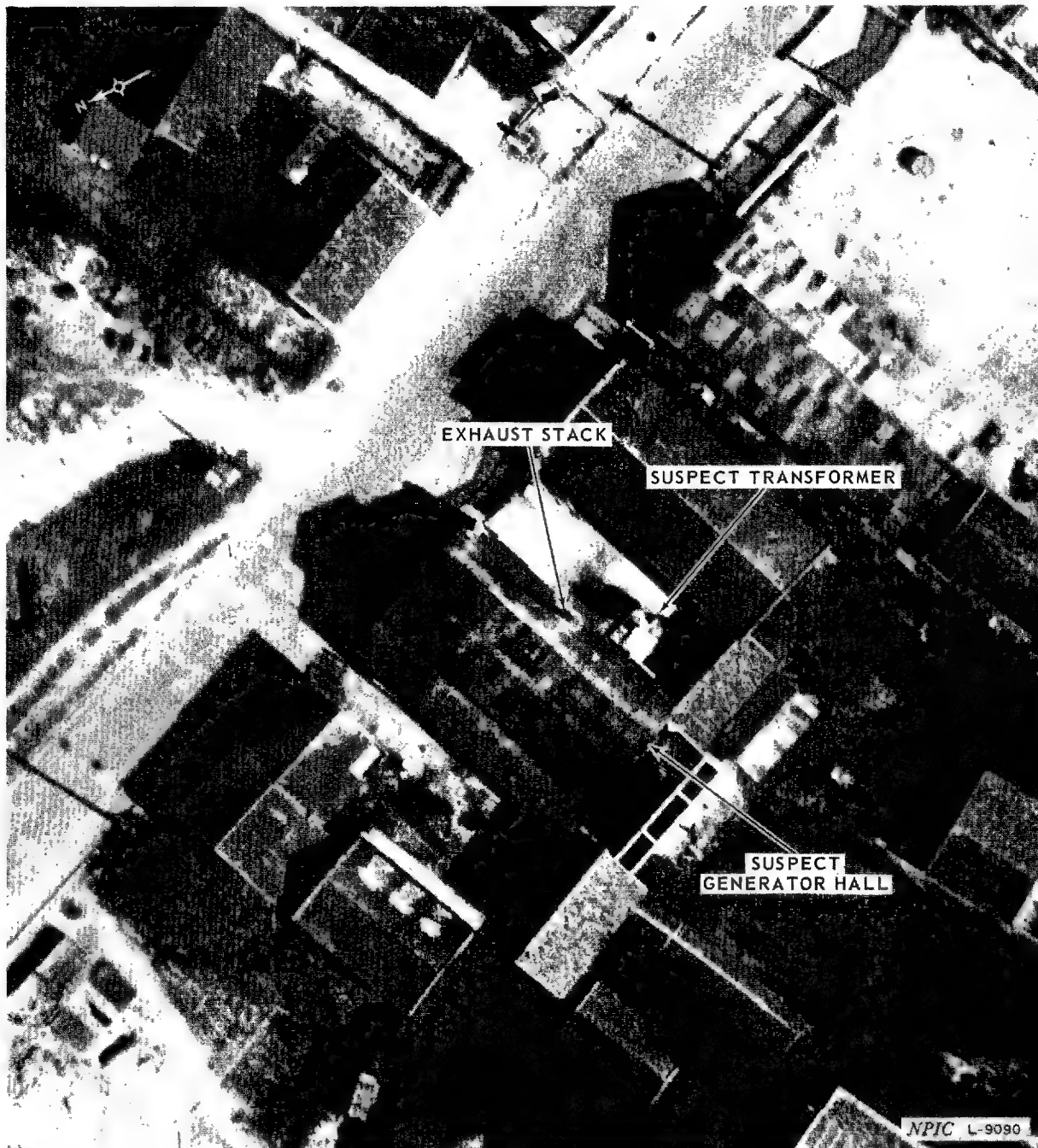
SECRET

25X1C

R-146/67

DONG HOI (SUSPECT) DIESEL/THERMAL ELECTRIC POWERPLANT  
XE727314  
UTM COORDINATES

17-27-48N 106-37-37E  
GEOGRAPHIC COORDINATES



C-19

SECRET

25X1C

SECRET

R-146/67

NO FOREIGN DISSEM

25X1A

BE NUMBER

XJ780072  
UTM COORDINATES

20-51-31N 106-42-39E  
GEOGRAPHIC COORDINATES

NAME: HAI PHONG PROBABLE DIESEL-ELECTRIC POWERPLANT AUX 2

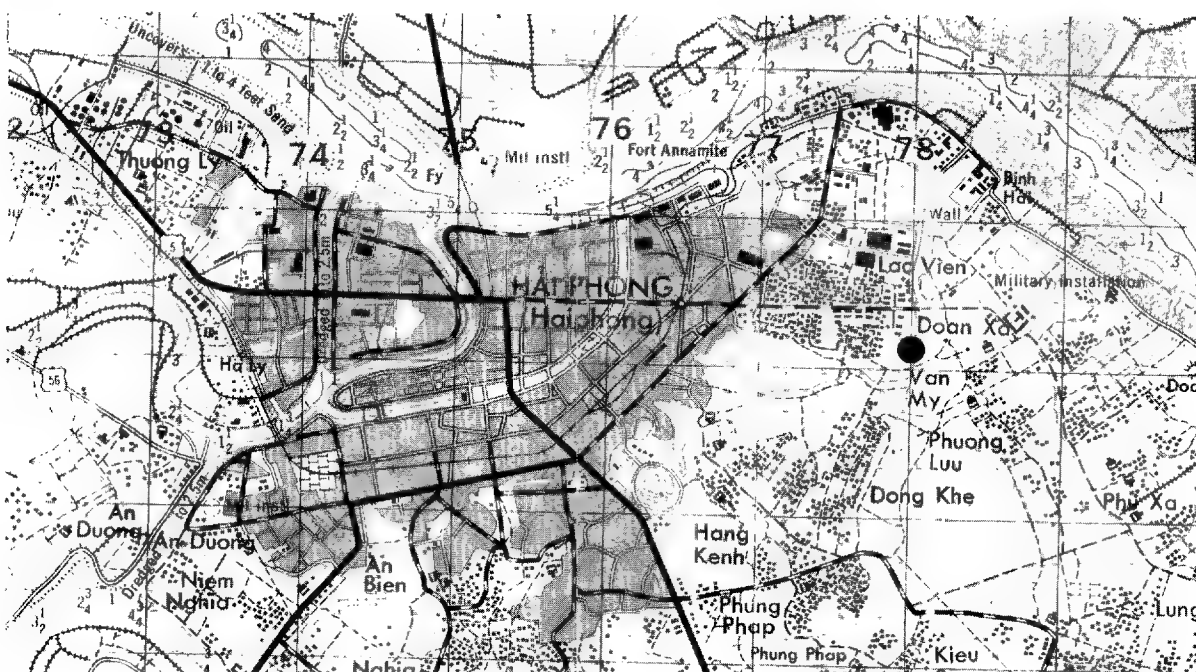
LOCATION: 2.6 NM NNW OF CAT BI AIRFIELD AND 0.9 NM NNE OF HAI PHONG RAILYARD

DESCRIPTION: INSTALLATION CONSISTS OF A REVETTED PROBABLE GENERATOR HALL, 2 PROBABLE POL STORAGE BUNKERS, AND A PUMPHOUSE.

25X1D

PHOTO REFERENCES:

MAP REFERENCES: AMS SERIES L7014, SHEET 6350-IV, 1ST ED, 1965 (U)  
AMS SERIES JOG(G) 1501, SHEET NF 48-16, 1ST ED, 1965 (U)



C-20

SECRET

NO FOREIGN DISSEM

SECRET

25X16

R-146/67

XJ780072  
UTM COORDINATES

HAI PHONG PROBABLE DIESEL-ELECTRIC POWERPLANT AUX 2  
20-51-31N 106-42-39E  
GEOGRAPHIC COORDINATES



C-21

SECRET

25X16

SECRET

NO FOREIGN DISSEM

25X1A

BE NUMBER

XJ762072

UTM COORDINATES

20-51-32N 106-41-37E

GEOGRAPHIC COORDINATES

NAME: HAI PHONG PROBABLE DIESEL-ELECTRIC POWERPLANT AUX 1

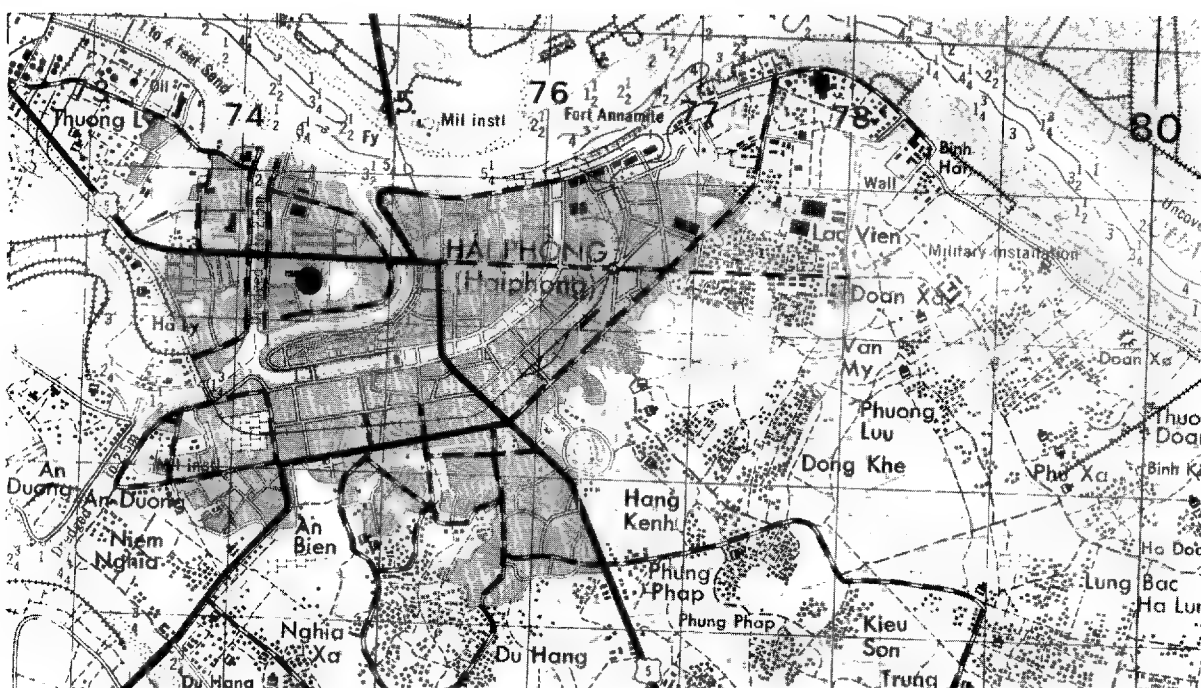
LOCATION: 3.1 NM NW OF CAT BI AIRFIELD AND 0.3 NM NORTH OF HAI PHONG RAILYARD

DESCRIPTION: INSTALLATION CONSISTS OF A REVETTED PROBABLE GENERATOR HALL WITH 2 EXHAUST MUFFLERS, A COOLING POND, AND 3 PROBABLE POL STORAGE BUNKERS.

25X1D

PHOTO REFERENCES:

MAP REFERENCES: AMS SERIES L7014, SHEET 6350-IV, 1ST ED, 1965 (U)  
AMS SERIES JOG(G) 1501, SHEET NF 48-16, 1ST ED, 1965 (U)



SECRET

NO FOREIGN DISSEM



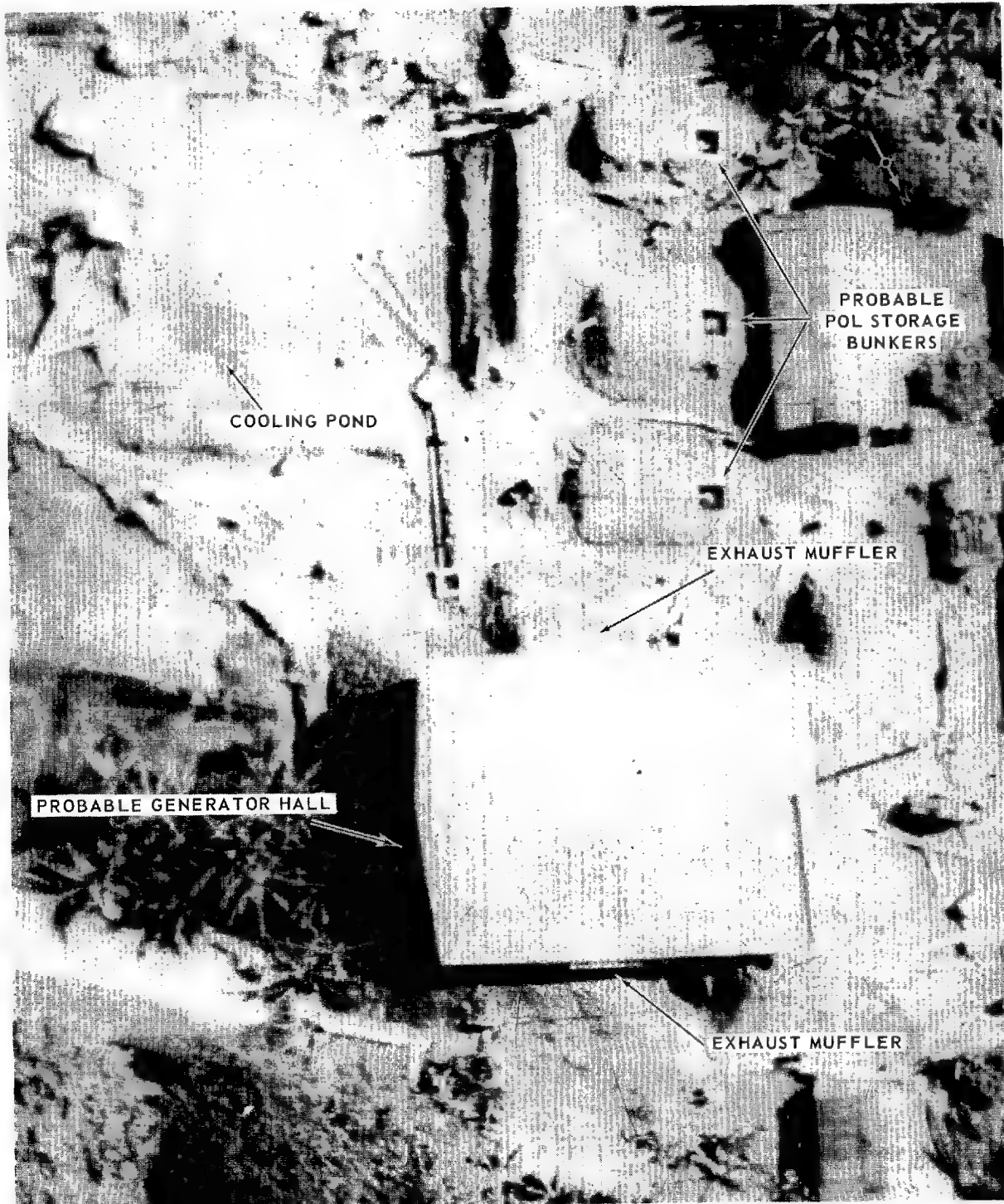
SECRET

25X1C

R-146/67

HAI PHONG PROBABLE DIESEL-ELECTRIC POWERPLANT AUX 1  
XJ762072  
UTM COORDINATES

20-51-32N 106-41-37E  
GEOGRAPHIC COORDINATES



C-23

SECRET



D

# SECTION D

## POWER GRID AND MAJOR SUBSTATIONS

SECRET

25X1C

R-146/67

## SECTION D

### Electric Power Grid and Substations

With extensive technical and material aid, North Vietnam has developed a sophisticated electric power grid (EPG) system.

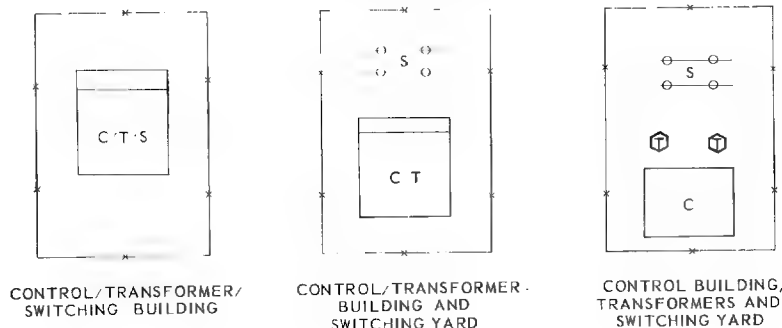
The EPG comprises at least 483.6 km of 110-kv cable and at least 1,298.9 km of 35-kv cable. Specifically, there are 465.6 km of photographically confirmed 110-kv cable, 18 km of probable 110-kv cable, 1,031 km of photographically confirmed 35-kv cable, and 267.9 km of probable 35-kv cable.\*

Electric power substations which transform/switch either 110 or 35 kv are considered major substations and are included in this report. There are over 400 minor substations composed of either an open, semienclosed, or enclosed facility whose purpose is to transform/switch/distribute low voltage power for local consumption. These installations are not included, but a photograph of each type is included in the miscellaneous section.

As shown below, the basic components of a 35-kv substation are a control building, transformer(s), and a switching yard. The term "switching yard" refers to the switching gear on the power-line supporting structures within the substation area. In most cases the switching gear is assumed, since the switches can be observed only on low-level photography of good interpretability.

\*These totals include 57.2 km of double circuit 110-kv cable and 114.5 km of double circuit 35-kv cable.

#### 35-KV SUBSTATIONS



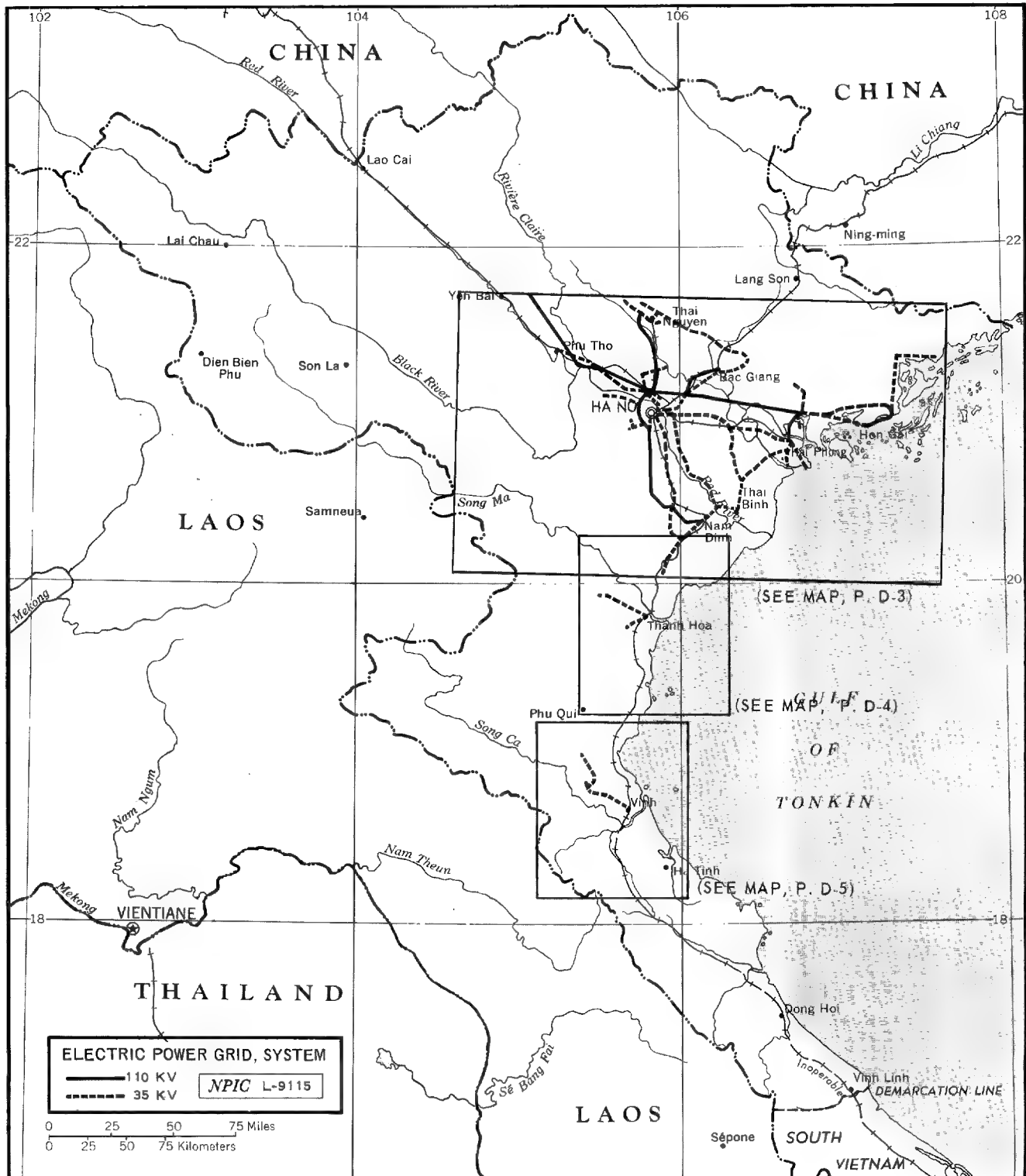
D-1

SECRET

SECRET

25X1C

R-146/67



SECRET

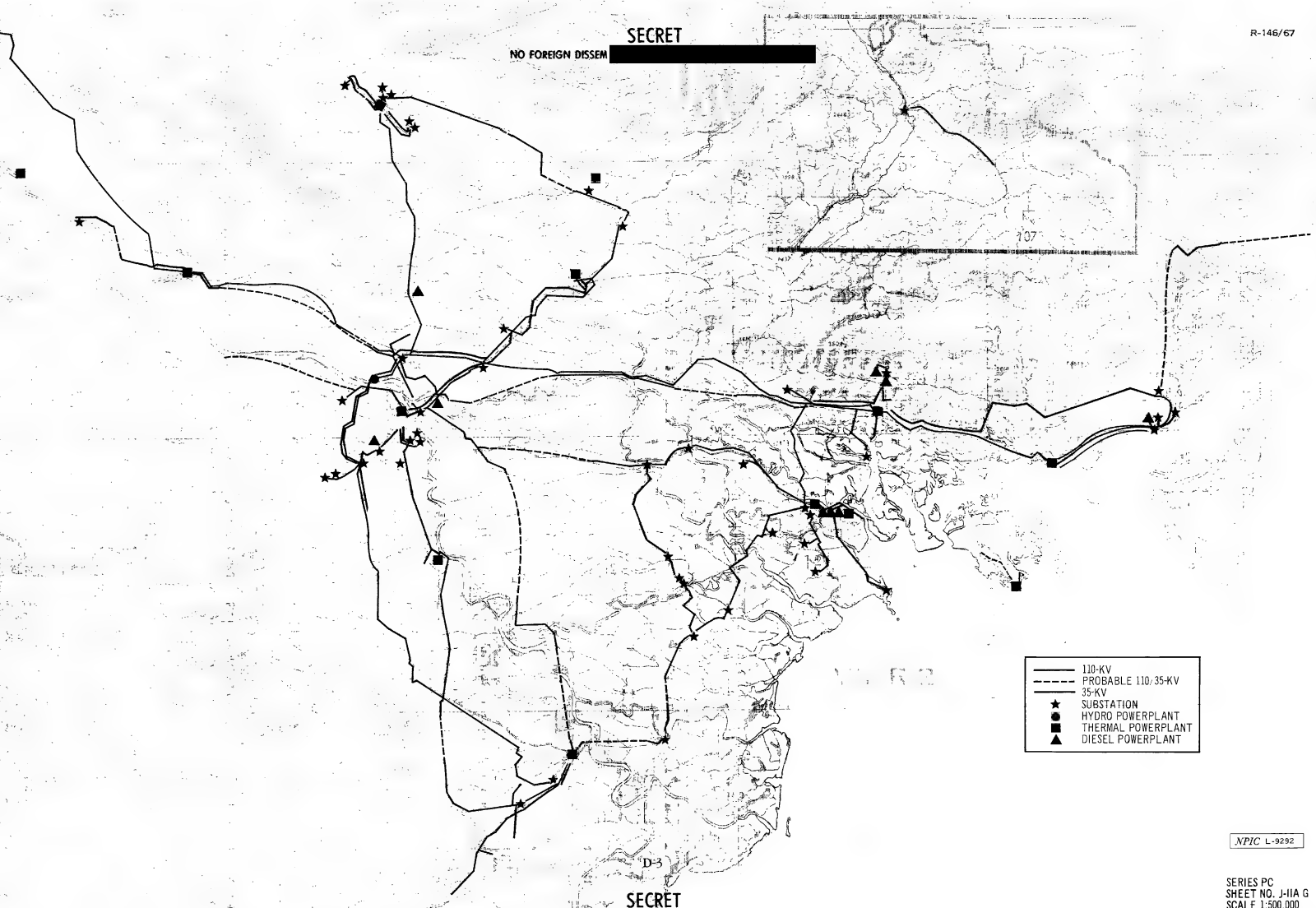
25X1C

25X1C

SECRET

NO FOREIGN DISSEM

R-146/67



SECRET

NO FOREIGN DISSEM

25X1C

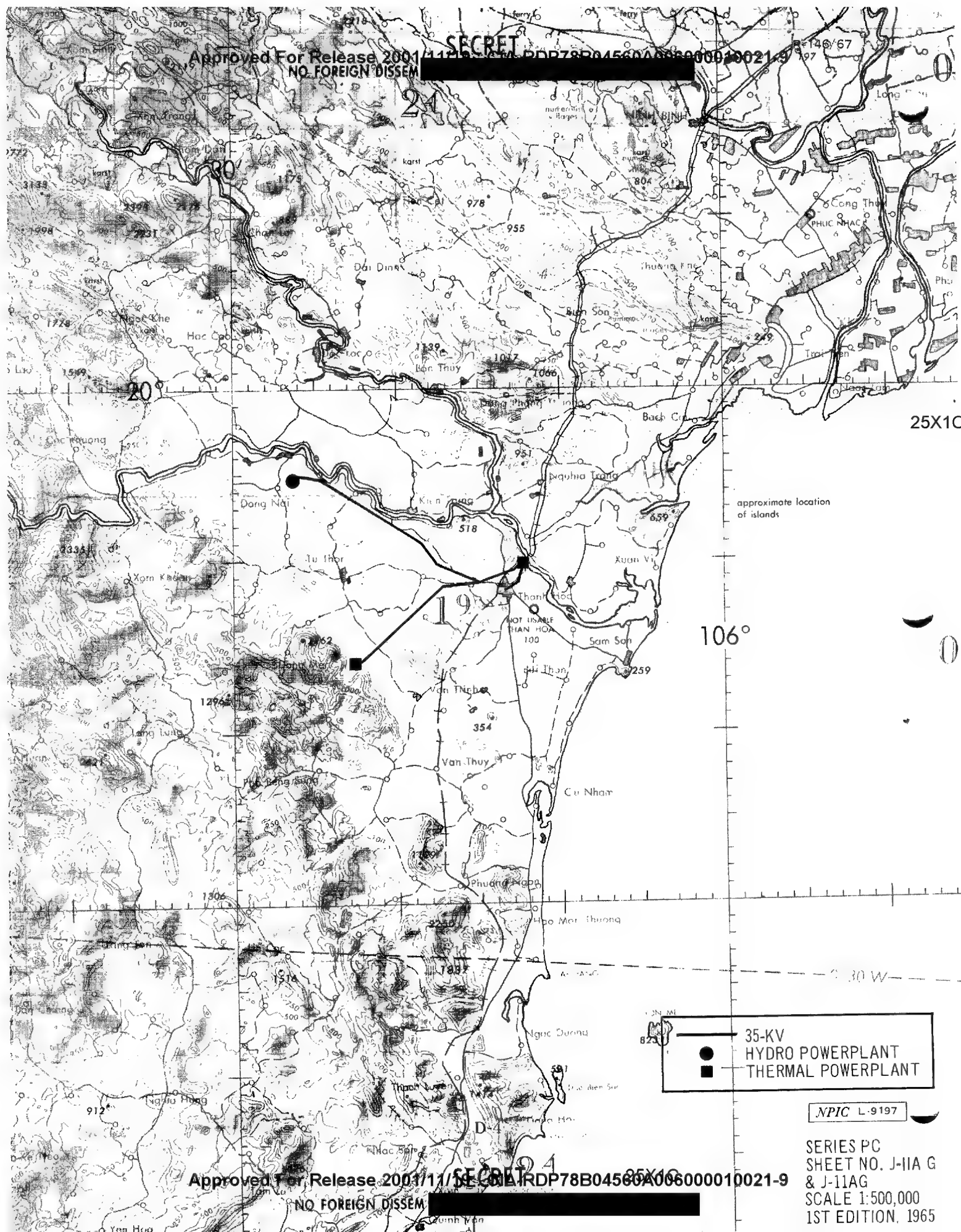
NPIC L-9292

SERIES PC  
SHEET NO. J-IIA G  
SCALE 1:500,000  
1ST EDITION, 1965  
(REDUCED APPROX. 30%)

Approved For Release 2001/11/11 : CIA-RDP78B04560A006000010021-9  
NO FOREIGN DISSEM

SECRET

146/67  
197



approximate location  
of islands

106°

35-KV  
HYDRO POWERPLANT  
THERMAL POWERPLANT

NPIC L-9197

Approved For Release 2001/11/11 : CIA-RDP78B04560A006000010021-9  
NO FOREIGN DISSEM

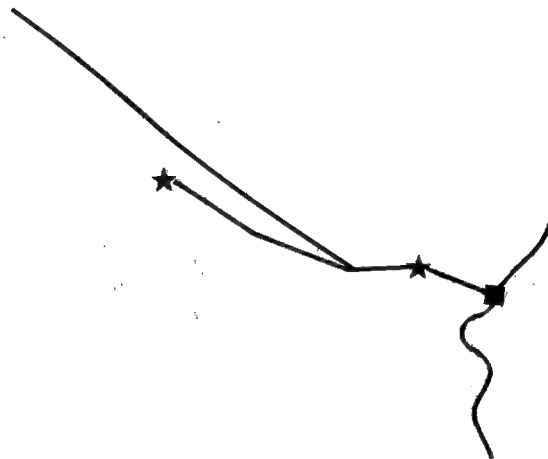
SECRET

SERIES PC  
SHEET NO. J-IIA G  
& J-IIAG  
SCALE 1:500,000  
1ST EDITION, 1965

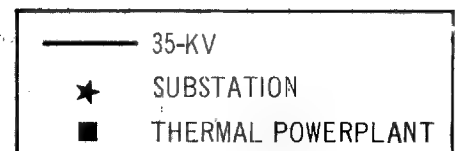
SECRET

25X1C

R-146/67



D-5



NPIC L-9201

SECRET

25X1C



SECRET

25X1G

R-146/67

**Electric Power Substations**  
**110 Kilovolts**

MAP KEY	INSTALLATION NAME	UTM COORDINATES	MAP SHEET	GEOGRAPHIC COORDINATES	PAGE
1	Cam Pha	YJ409241	6451-II	210012N 1071908E	10
2	Ha Dong	WJ792174	6150-I	205729N 1054546E	12
3	Hai Phong	XJ719083	6350-IV	205206N 1063912E	14
4	Ha Noi	WJ878377	6151-II	210825N 1055044E	16
5	Cam Pha-(Mong Duong)	YJ429303	6451-II	210333N 1072018E	18
6	Nam Dinh	XH187523	6249-IV	202200N 1060812E	20

SECRET

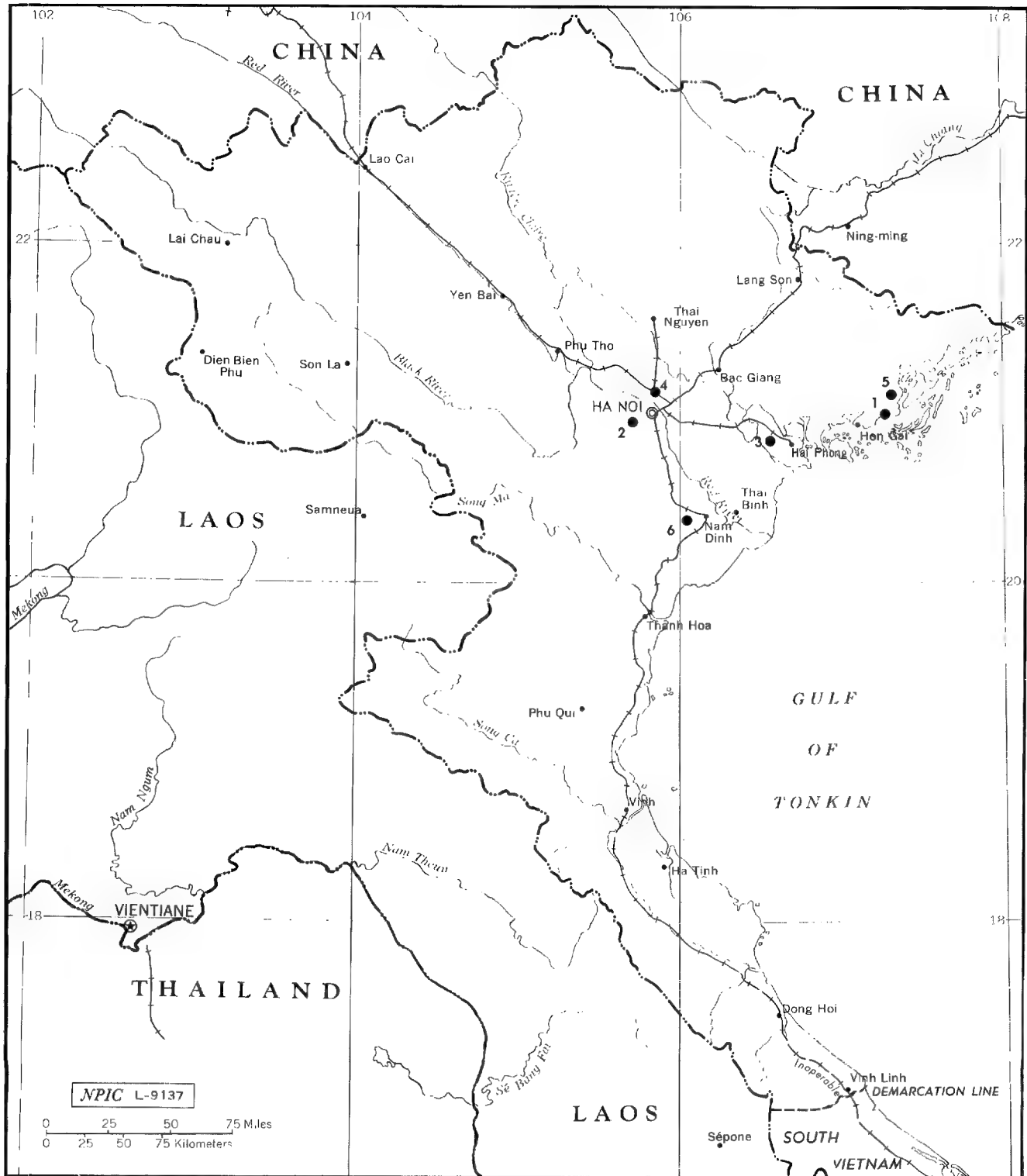
25X1G

SECRET

25X1C

R-146/67

ELECTRIC POWER SUBSTATIONS 110-KV



SECRET

25X1C

SECRET

R-146/67

**Electric Power Substations  
 35 Kilovolts**

MAP KEY	INSTALLATION NAME	UTM COORDINATES	MAP SHEET	GEOGRAPHIC COORDINATES	PAGE
1	Hai Phong (Cement Plant)	XJ737076	6350-IV	205147N 1064018E	22
2	Thai Nguyen (Steel Plant)	WJ906834	6152-II	213319N 1055236E	24
3	Vang Danh	XJ873364	6351-II	210718N 1064816E	26
4	Vinh (Probable)	WF691642	6146-III	184011N 1053920E	28
5	Bac Ninh	XJ091437	6251-III	211136N 1060304E	30
6	An Thai	XJ571175	6350-IV	205710N 1063037E	32
7	Bo Ha	XJ241713	6251-IV	212633N 1061155E	34
8	Cam Pha Port	YJ468264	6451-II	210126N 1072230E	36
9	Thai Nguyen (Co Loung)	WJ743943	6152-III	213909N 1054305E	38
10	Cam Pha (Dinh Cu)	YJ424256	6451-II	210100N 1071955E	40
11	Ninh Giang (Vinh Bao)	XJ1550886	6250-II	204133N 1062921E	42
12	Hai Duong	XJ389163	6250-I	205638N 1061510E	44
13	Kep	XJ321646	6251-I	212248N 1061630E	46
14	Hai Phong (Khuc Gian)	XJ623037	6350-IV	204940N 1063338E	48
15	Kien An	XJ698005	6350-IV	204754N 1063754E	50
16	Hai Duong (Thanh Lien)	XJ473203	6250-I	205845N 1062504E	52
17	Hai Noi, Mai Dong	WJ902213	6150-I	205934N 1055205E	54
18	Mao Khe	XJ683307	6351-III	210418N 1063712E	56
19	Hai Duong (Do Nghia)	XJ425982	6250-I	204652N 1062207E	58
20	Ha Noi (Ngoc Gia)	WJ733136	6150-IV	205523N 1054217E	60
21	Hai Noi (Ngoc Lam)	WJ906272	6151-II	210242N 1055223E	62
22	Bac Ninh (Phuc Hau)	XJ062378	6251-III	210824N 1060120E	64
23	Phu Tho (Suspect)	WJ232656	6051-IV	212338N 1051324E	66
24	Van Dien (Quynh Do)	WJ878157	6150-I	205635N 1055043E	68
25	Thai Binh	XH408613	6249-I	202648N 1062103E	70
26	Thai Nguyen	WJ845904	6152-II	213700N 1054901E	72
27	Tho Linh	XJ746954	6350-IV	204508N 1064040E	74
28	Hai Phong, Trang Kinh	XJ836186	6350-I	205748N 1064600E	76
29	Nam Dinh (Van Coi)	XJ1127486	6249-IV	202005N 1060441E	78
30	Yen Thanh	WJ743149	6150-IV	205605N 1054255E	80
31	Ninh Giang East	XJ1464926	6250-II	204343N 1062425E	82
32	Ninh Giang West	XH459926	6250-II	204346N 1062404E	84
33	Ninh Giang, Vu Hai	XJ1472822	6250-II	203808N 1062443E	86
34	Hai Dong (Xom Dong)	WJ821196	6150-I	205837N 1054723E	88
35	Xom Trung Hoa	WF519703	6046-II	184331N 1052931E	90
36	Hai Noi (Giap Tu)	WJ906213	6150-I	205934N 1055220E	92
37	Do Son	XH864913	6350-II	204247N 1064728E	94
38	Trach Roc	WJ993873	6152-II	213515N 1055735E	96
39	Tuong Mai	WJ890207	6150-I	205911N 1055125E	98
40	Son Dong	WJ718274	6151-III	210256N 1054127E	100
41	Lang Son	XX812171	6352-I	215057N 1064513E	102

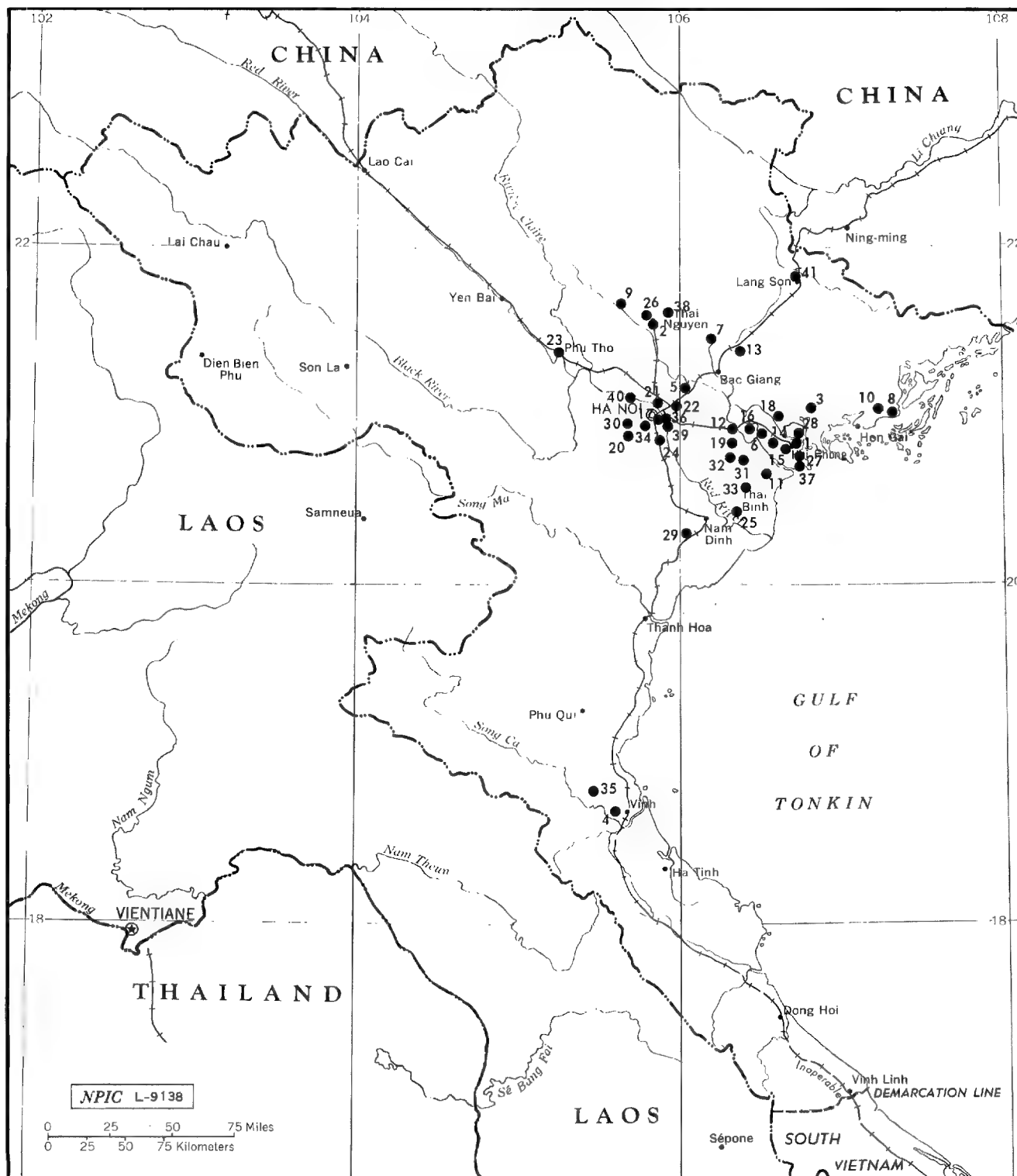
SECRET

SECRET

25X1C

R-146/67

### ELECTRIC POWER SUBSTATIONS 35-KV



SECRET

25X1C

NO FOREIGN DISSEM

SECRET

25X1A

BE NUMBER

YJ409241  
UTM COORDINATES

21-00-12N 107-19-08E  
GEOGRAPHIC COORDINATES

NAME: CAM PHA TRANSFORMER/RECTIFIER SUBSTATION

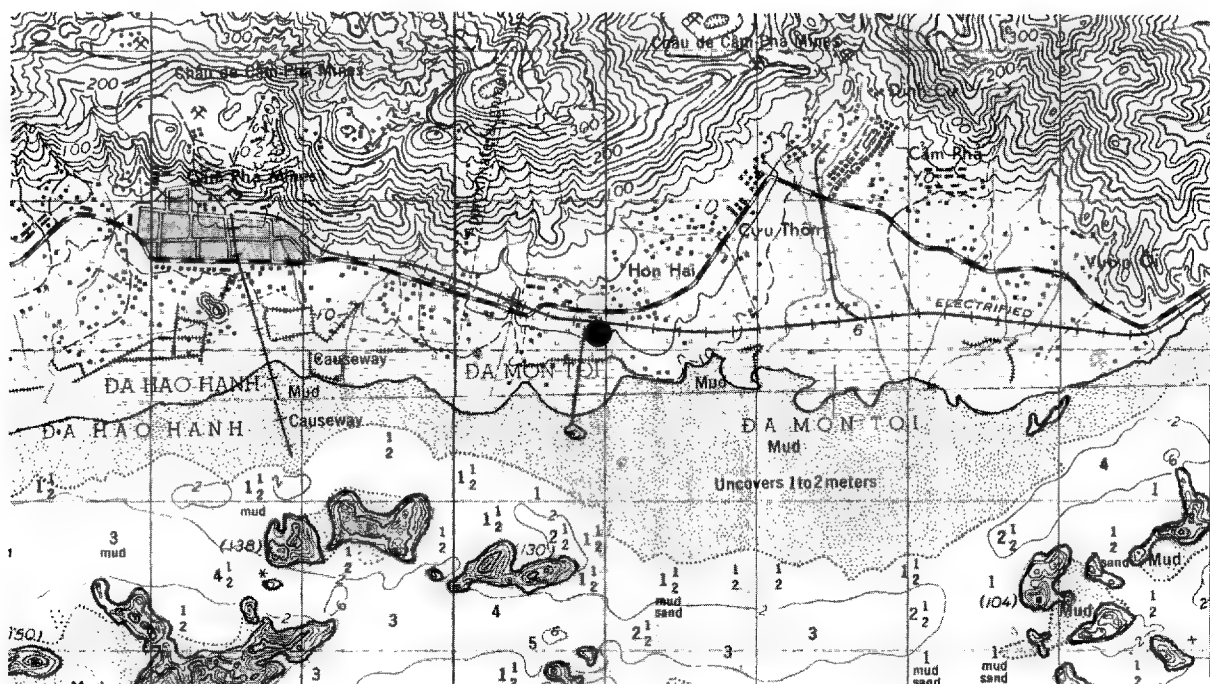
LOCATION: 1.4 NM EAST OF CAM PHA

DESCRIPTION: THE SUBSTATION CONSISTS OF A SWITCHING YARD, 5 SUSPECT TRANSFORMERS, AND A CONTROL/RECTIFIER BUILDING. TWO 110-KV AND FIVE 35-KV POWERLINES ARE TIED INTO THE SUBSTATION THE CONTROL/RECTIFIER BUILDING RECTIFIES THE ELECTRIC POWER FOR THE ELECTRIFIED RAILROAD.

25X1D

PHOTO REFERENCES:

MAP REFERENCES: AMS SERIES L7014, SHEET 6451-II, 1ST ED, L965 (U)  
AMS SERIES JOG(G) 1501, SHEET NF 48-12, 1ST ED, 1965 (U)



SECRET

25X1C

NO FOREIGN DISSEM

SECRET

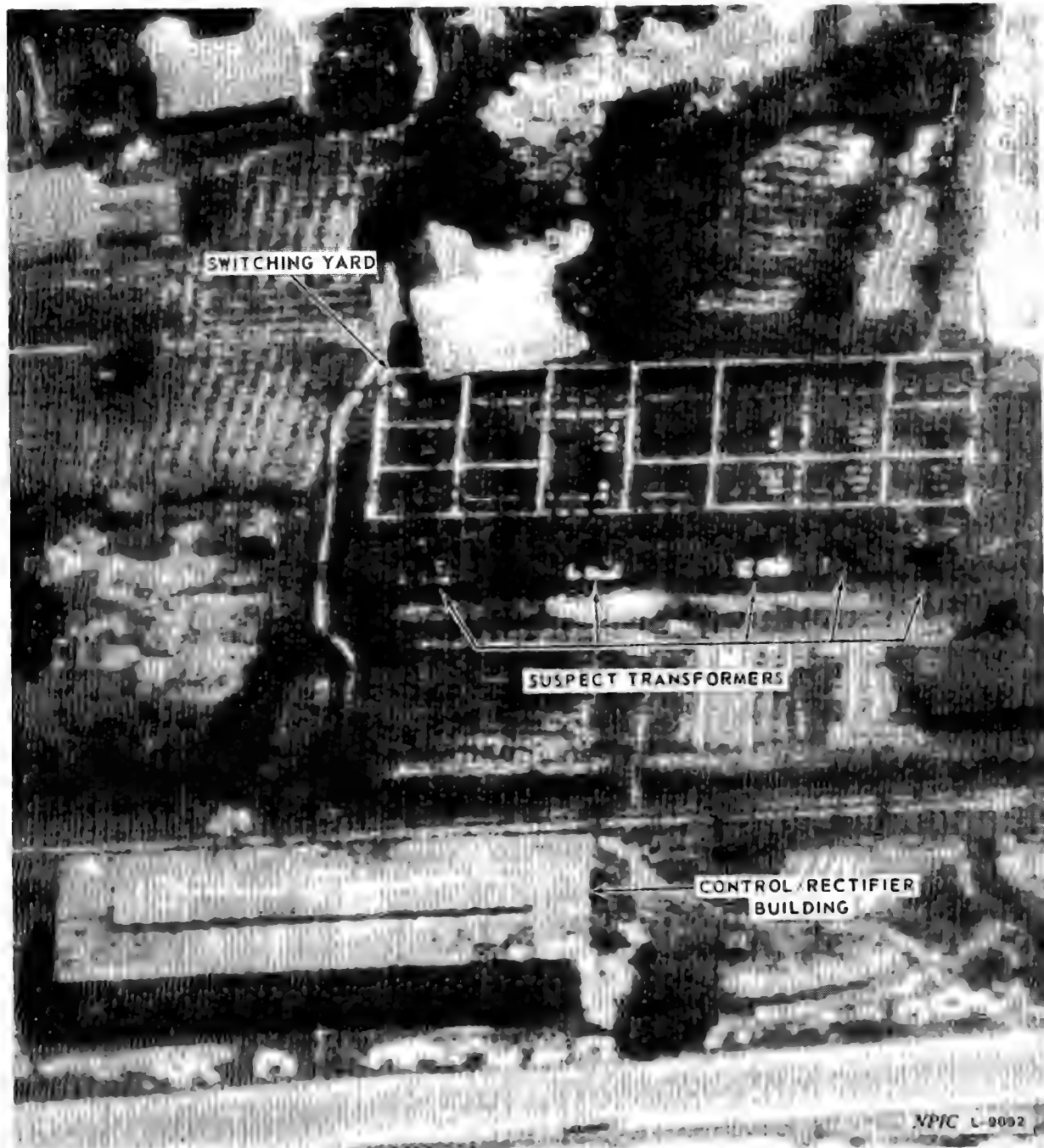
25X1C

R 146/67

YJ409241  
UTM COORDINATES

CAM PHA SUBSTATION (ELECTRIFIED RAILROAD)

21-00-12N 107-19-08E  
GEOGRAPHIC COORDINATES



NPIC L-8032

D-11

SECRET



SECRET

25X1C

B-146/67

25X1A

BE NUMBER

WJ792174  
UTM COORDINATES

20-57-29N 105-45-46E  
GEOGRAPHIC COORDINATES

NAME: HA DONG TRANSFORMER SUBSTATION

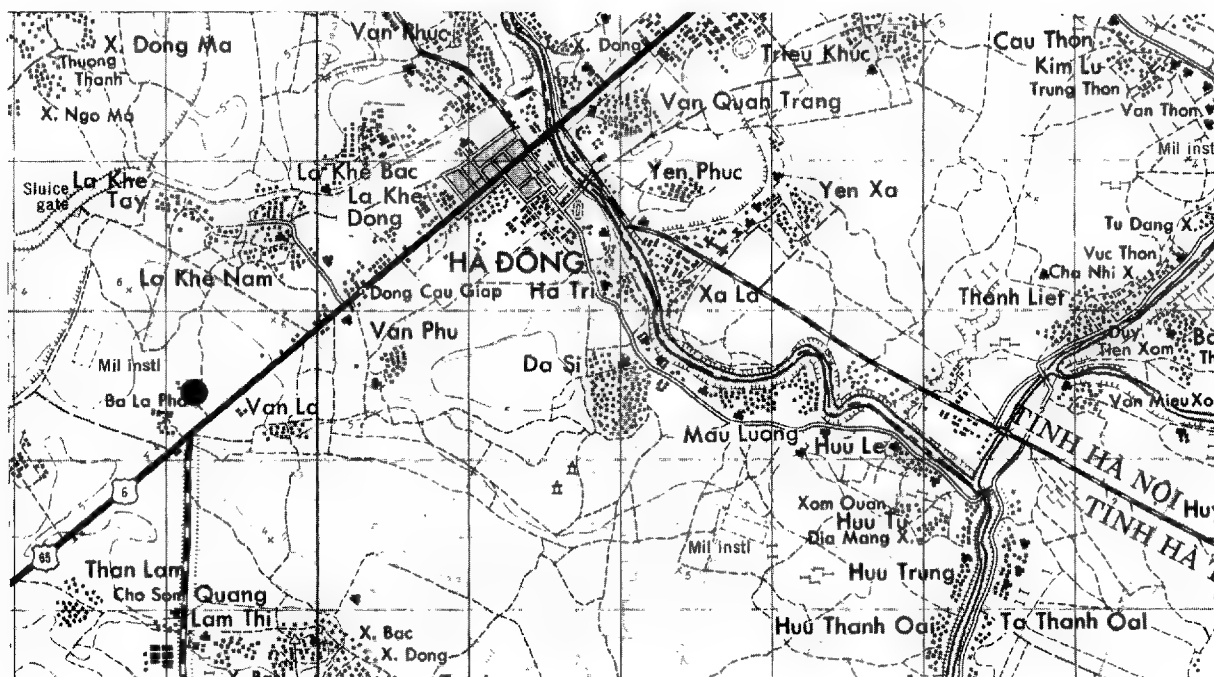
LOCATION: 4.6 NM SW OF HANOI/BAC MAI AIRFIELD

DESCRIPTION: THE SECURED SUBSTATION CONSISTS OF A CONTROL BUILDING, A TRANSFORMER, 2 SWITCHING YARDS (110 AND 35-KV), AND 3 SUPPORT BUILDINGS. ONE 2-CIRCUIT AND ONE 1-CIRCUIT 110-KV AND THREE 35-KV POWERLINES ARE TIED INTO THE SUBSTATION.

25X1D

PHOTO REFERENCES:

MAP REFERENCES: AMS SERIES L7014, SHEET 6150-I, 1ST ED, 1965 (U)  
AMS SERIES JOG(G) 1501, SHEET NF 48-15, 1ST ED, 1965 (U)



D-12

SECRET

SECRET

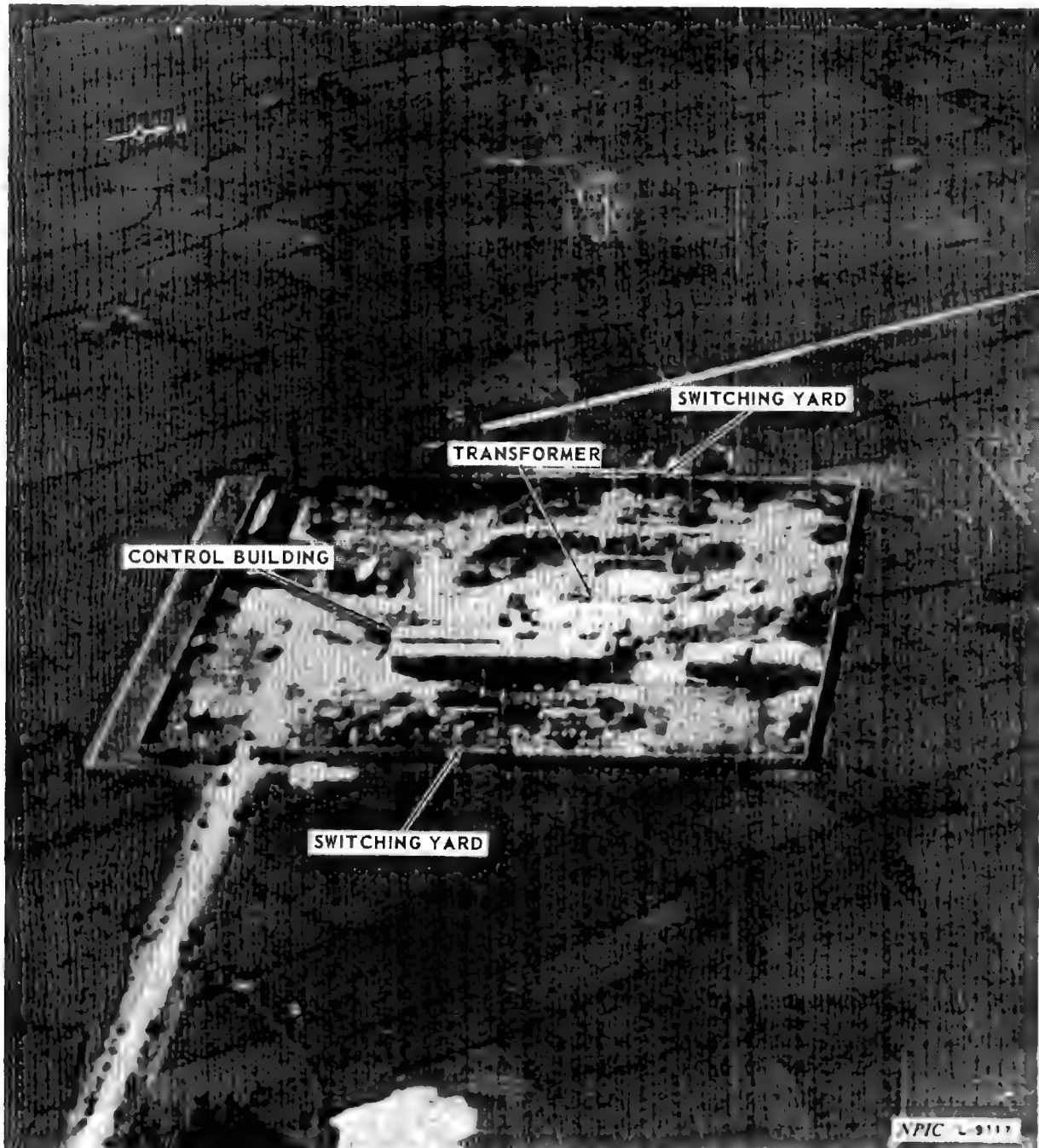
25X1C

R-146/67

HA DONG TRANSFORMER SUBSTATION

WJ792174  
UTM COORDINATES

20-57-29N 105-45-46E  
GEOGRAPHIC COORDINATES



D-13

SECRET

25X1C

SECRET

25X1C

R-146/67

25X1A

BE NUMBER

XJ719083  
UTM COORDINATES

20-52-06N 106-39-12E  
GEOGRAPHIC COORDINATES

NAME: HAI PHONG TRANSFORMER SUBSTATION

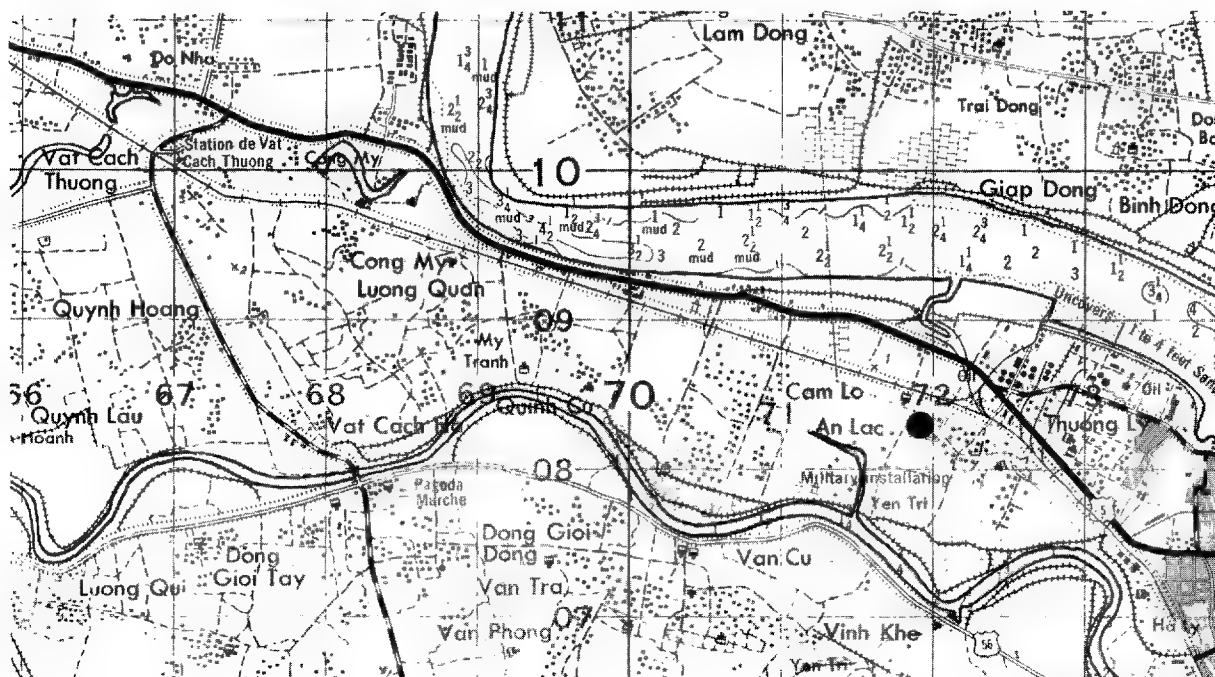
LOCATION: 1.8 NM WEST OF HAI PHONG PORT

DESCRIPTION: THE SUBSTATION IS A SECURED INSTALLATION CONSISTING OF A CONTROL/SWITCHING BUILDING, A TRANSFORMER AREA (TRANSFORMER REMOVED), A SWITCHING YARD, 3 TRANSFORMER-OIL STORAGE TANKS, AN OPEN WATER TANK, AND 2 ASSOCIATED BUILDINGS. ONE 110-KV, FIVE 35-KV, AND PROBABLY 2 LOW VOLTAGE POWERLINES ARE TIED INTO THE SUBSTATION.

25X1D

PHOTO REFERENCES:

MAP REFERENCES: AMS SERIES L7014, SHEET 6350-IV, 1ST ED, 1965 (U)  
AMS SERIES JOG(G) 1501, SHEET NF 48-16, 1ST ED, 1965 (U)



D-14

SECRET

25X1C

SECRET

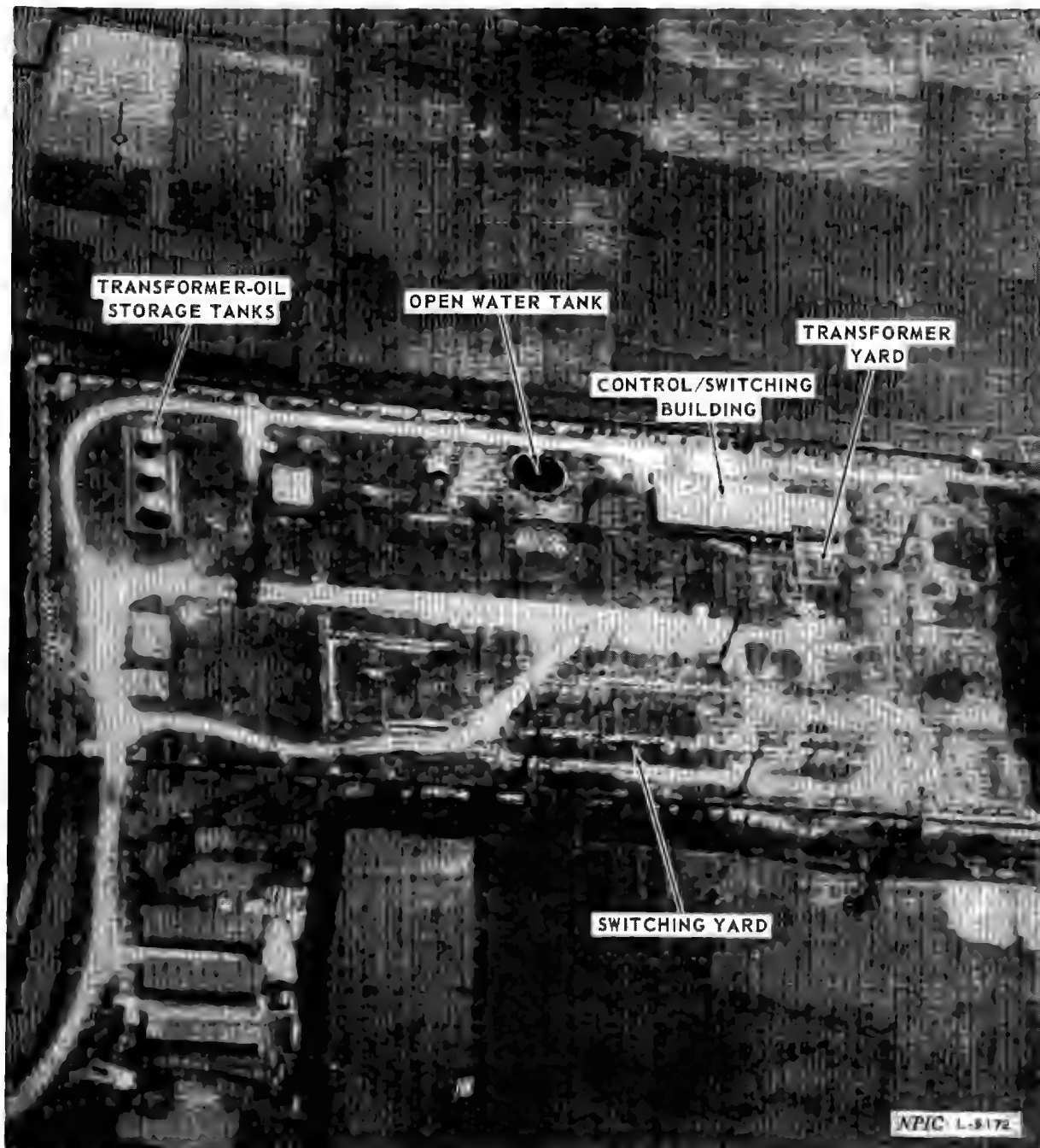
25X1C

R-146/67

XJ719083  
UTM COORDINATES

HAI PHONG TRANSFORMER SUBSTATION

20-52-06N 106-39-12E  
GEOGRAPHIC COORDINATES



D-15

SECRET

25X1C

BE NUMBER

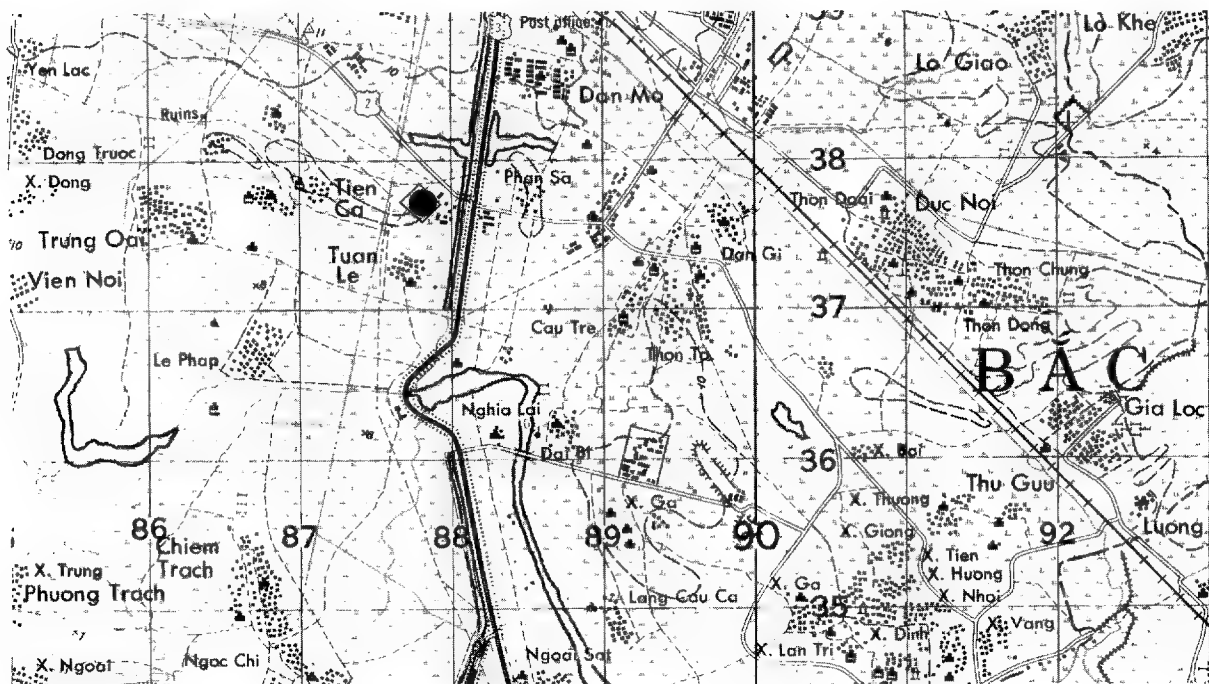
WJ878377  
UTM COORDINATES

21-08-25N 105-50-44E  
GEOGRAPHIC COORDINATES

LOCATION: 7 NM NORTH OF HA NOI

25X1D PHOTO REFERENCES:

MAP REFERENCES: AMS SERIES L7014, SHEET 6151-II, 1ST ED, 1965 (U)  
AMS SERIES JOG(G) 1501, SHEET NF 48-11, 1ST ED, 1965 (U)



D-16



SECRET

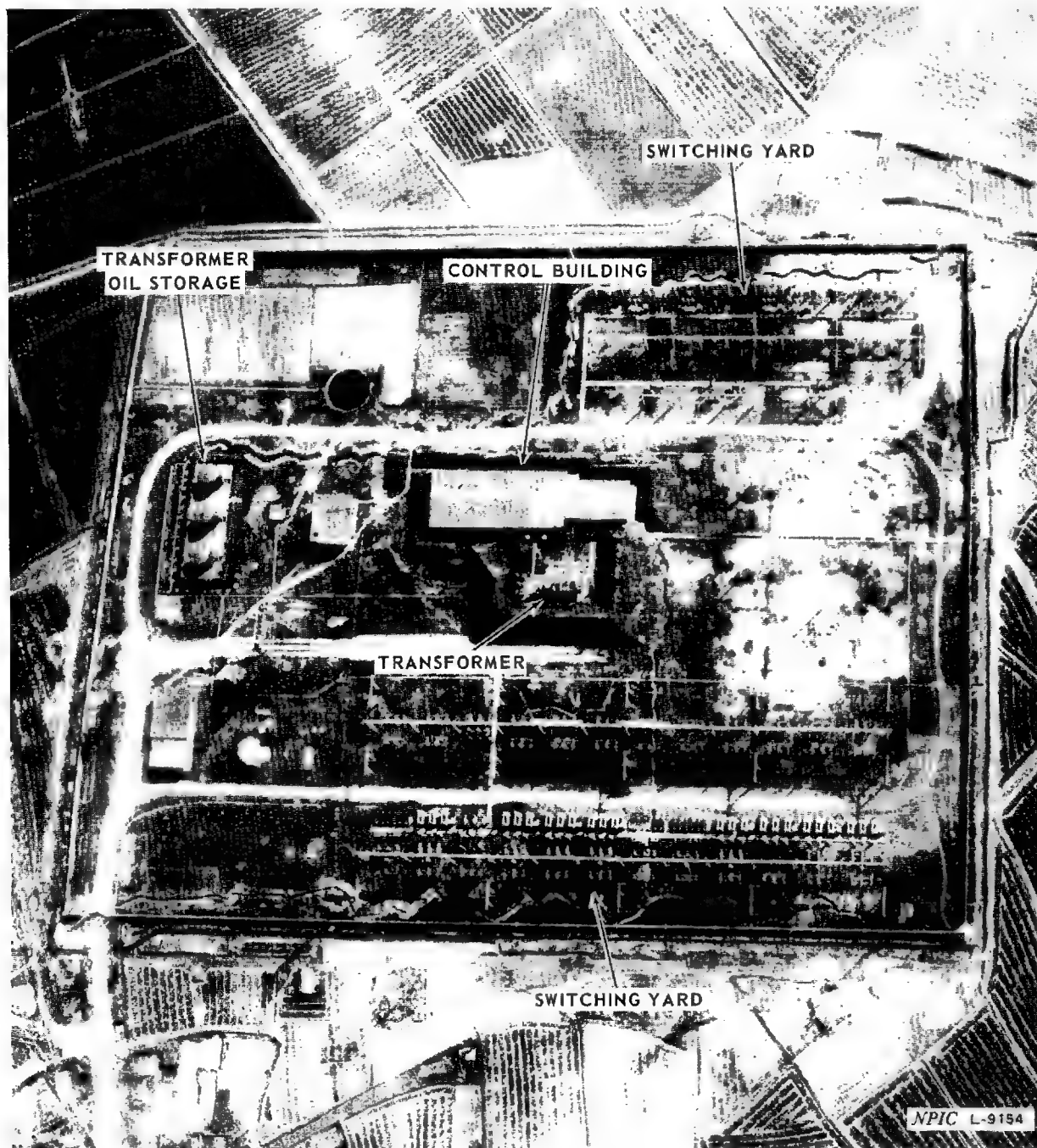
25X1C

R-146/67

WJ878377  
UTM COORDINATES

HA NOI TRANSFORMER SUBSTATION DONG ANH

21-08-25N 105-50-44E  
GEOGRAPHIC COORDINATES



D-17

SECRET



SECRET

25X1C

R-146/67

25X1A

BE NUMBER

YJ429303  
UTM COORDINATES

21-03-33N 107-20-18E  
GEOGRAPHIC COORDINATES

NAME: CAM PHA TRANSFORMER SUBSTATION MONG DUONG

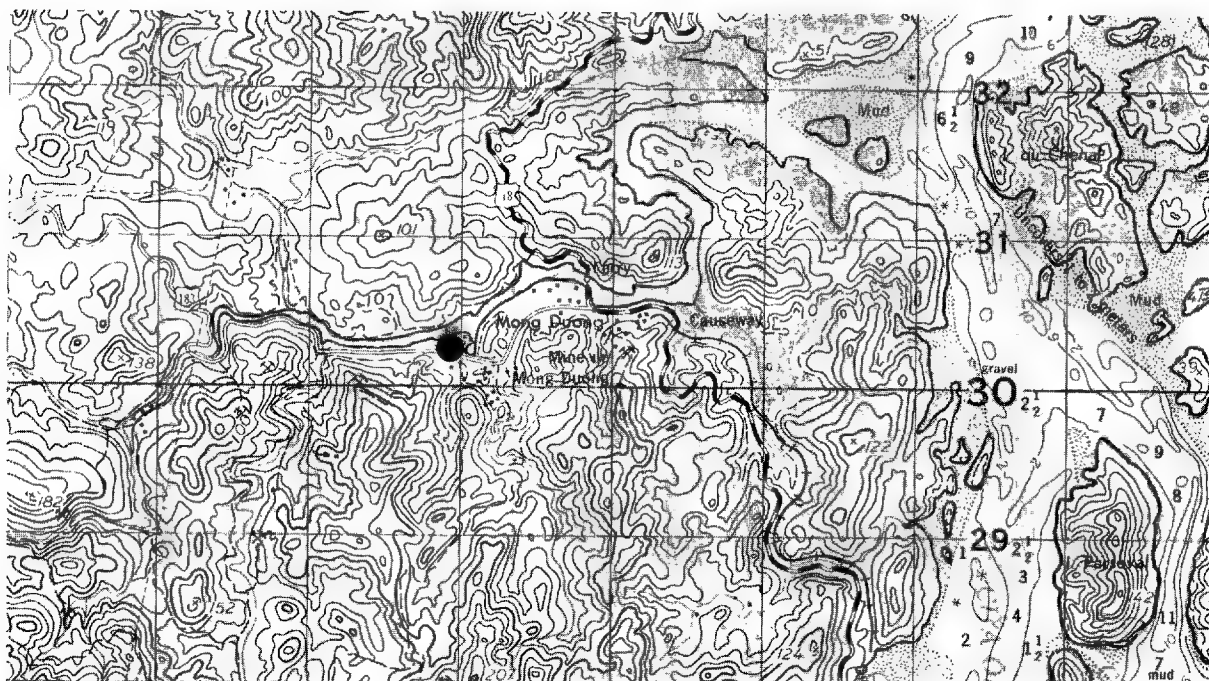
LOCATION: 4.2 NM NNE OF CAM PHA

DESCRIPTION: THE SUBSTATION HAS SUSTAINED STRUCTURAL BOMB DAMAGE AND, WITH THE SUBSEQUENT REMOVAL OF THE TRANSFORMER, IS NO LONGER CONSIDERED OPERATIONAL. THE CONTROL BUILDING, BOTH SWITCHING YARDS, 2 TRANSFORMER-OIL STORAGE TANKS, AND A SUPPORT BUILDING HAVE ALL SUSTAINED DAMAGE. ONE POSSIBLE 110-KV, ONE 35-KV, AND 1 LOW VOLTAGE POWERLINE ARE TIED INTO THE INSTALLATION.

25X1D

PHOTO REFERENCES:

MAP REFERENCES: AMS SERIES L7014, SHEET 6451-II, 1ST ED, 1965 (U)  
AMS SERIES JOG(G) 1501, SHEET NF 48-12, 1ST ED, 1965 (U)



D-18

SECRET

SECRET

25X1C

R-146/67

YJ429303  
UTM COORDINATES

CAM PHA TRANSFORMER SUBSTATION MONG DUONG

21-03-33N 107-20-18E  
GEOGRAPHIC COORDINATES



D-19

SECRET

25X1C

SECRET

25X1A

BE NUMBER

XH187523  
UTM COORDINATES

20-22-00N 106-08-12E  
GEOGRAPHIC COORDINATES

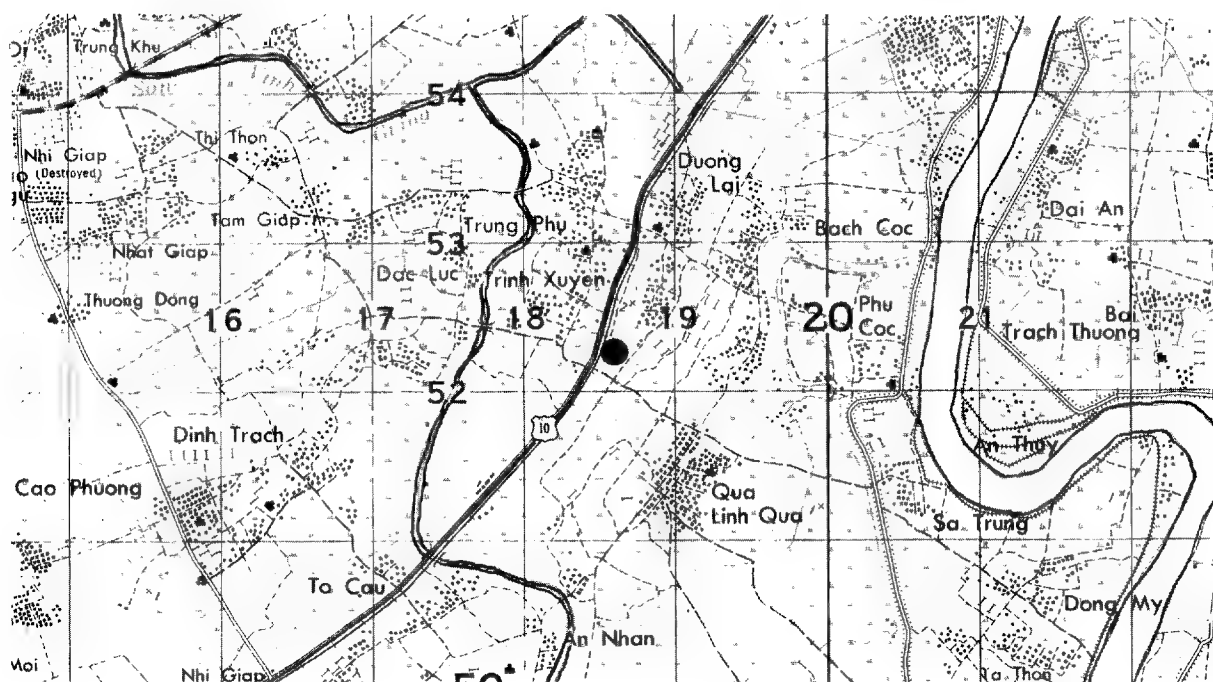
NAME: NAM DINH TRANSFORMER SUBSTATION

LOCATION: 3.8 NM SSW OF NAM DINH

DESCRIPTION: THE SUBSTATION IS A SECURED INSTALLATION WHICH INCLUDES A CONTROL BUILDING, 1 TRANSFORMER, 2 SWITCHING YARDS (110 AND 35-KV), AND 1 SUPPORT BUILDING. ONE 110-KV, THREE 35-KV, AND 1 LOW VOLTAGE POWERLINE ARE TIED INTO THE SUBSTATION.

25X1D PHOTO REFERENCES:

MAP REFERENCES: AMS SERIES L7014, SHEET 6249-IV, 1ST ED, 1965 (U)  
AMS SERIES JOG (G) 1501, SHEET NF 48-15, 1ST ED, 1965 (U)



D-20

SECRET

SECRET

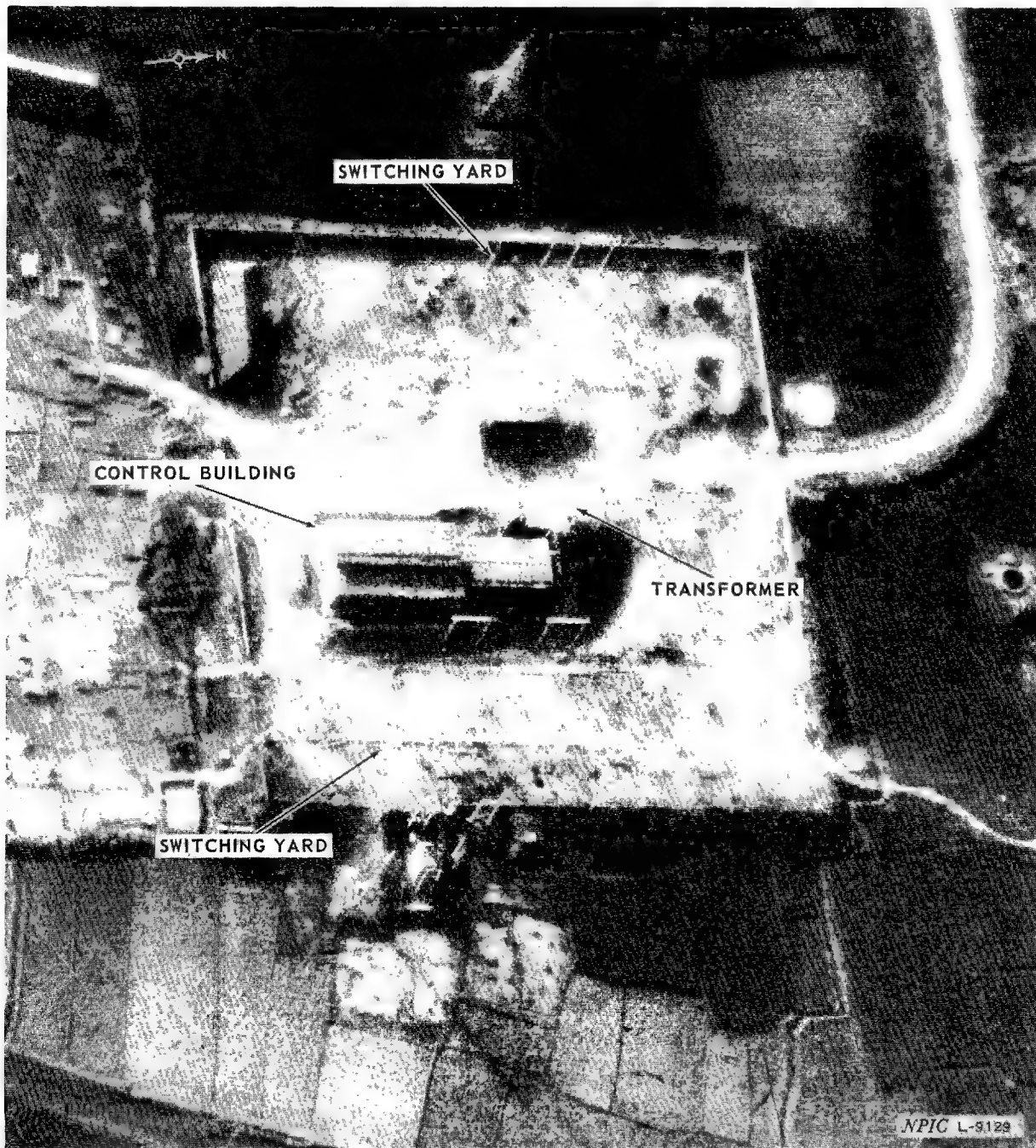
25X1C

R-146/67

NAM DINH TRANSFORMER SUBSTATION

XH187523  
UTM COORDINATES

20-22-00N 106-08-12E  
GEOGRAPHIC COORDINATES



D-21

SECRET

25X1C

SECRET

25X1C

R 146/67

25X1A

BE NUMBER

XJ737076  
UTM COORDINATES

20-51-47N 106-40-18E  
GEOGRAPHIC COORDINATES

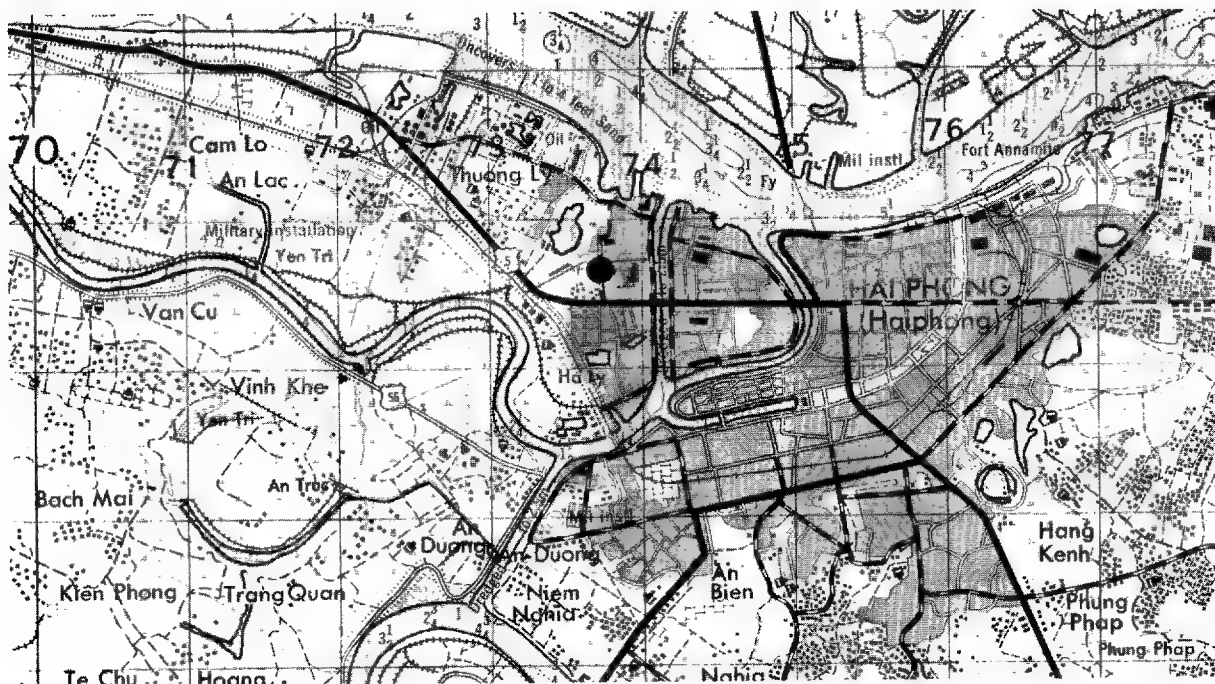
NAME: HAI PHONG TRANSFORMER SUBSTATION CEMENT PLANT

LOCATION: 1.4 NM WEST OF HAI PHONG

DESCRIPTION: THE SUBSTATION CONSISTS OF A CONTROL/TRANSFORMING/SWITCHING BUILDING. THIS INSTALLATION PROBABLY SERVES THE CEMENT PLANT AND ADJACENT INDUSTRIES. THREE 35-KV AND PROBABLY 2 LOW VOLTAGE POWERLINES ARE TIED INTO THE SUBSTATION.

25X1D PHOTO REFERENCES:

MAP REFERENCES: AMS SERIES L7014, SHEET 6350-IV, 1ST ED, 1965 (U)  
AMS SERIES JOG(G) 1501, SHEET NF 48-16, 1ST ED, 1965 (U)





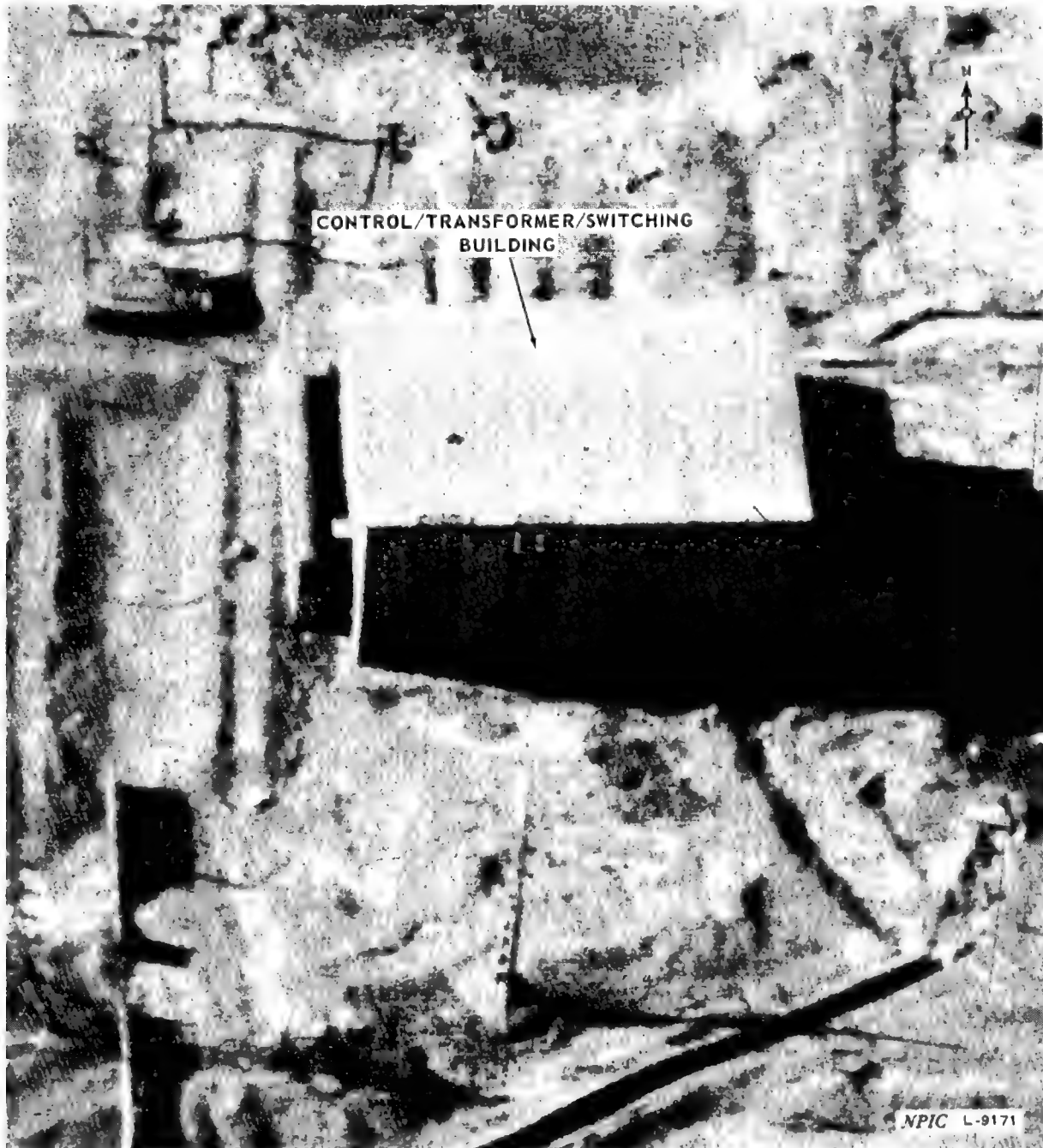
SECRET

25X1C

R-146/67

HAI PHONG TRANSFORMER SUBSTATION CEMENT PLANT  
XJ737076  
UTM COORDINATES

20-51-47N 106-40-18E  
GEOGRAPHIC COORDINATES



D-23

SECRET

25X1C



SECRET

25X1C

P-146/67

25X1A

BE NUMBER

WJ906834  
UTM COORDINATES

21-33-19N 105-52-36E  
GEOGRAPHIC COORDINATES

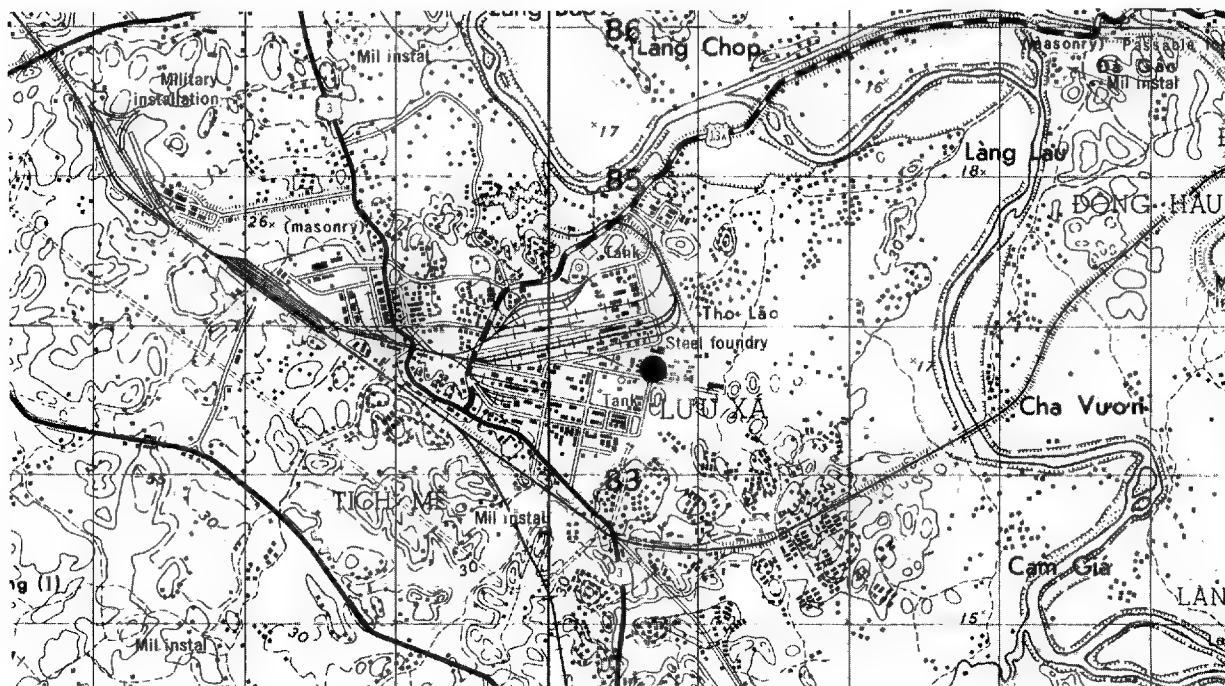
NAME: THAI NGUYEN TRANSFORMER SUBSTATION STEEL PLANT

LOCATION: 2.8 NM SE OF THAI NGUYEN

DESCRIPTION: THE REVETTED SUBSTATION CONTAINS A CONTROL BUILDING, 2 COVERED TRANSFORMERS, A SWITCHING BUILDING, AND AN ASSOCIATED BUILDING. TWO 35-KV AND 2 LOW VOLTAGE POWERLINES ARE TIED INTO THE SUBSTATION.

25X1D PHOTO REFERENCES:

MAP REFERENCES: AMS SERIES L7014, SHEET 6152-II, 1ST ED, 1965 (U)  
AMS SERIES JOG(G) 1501, SHEET NF 48-11, 1ST ED, 1965 (U)



D-24

SECRET

25X1C

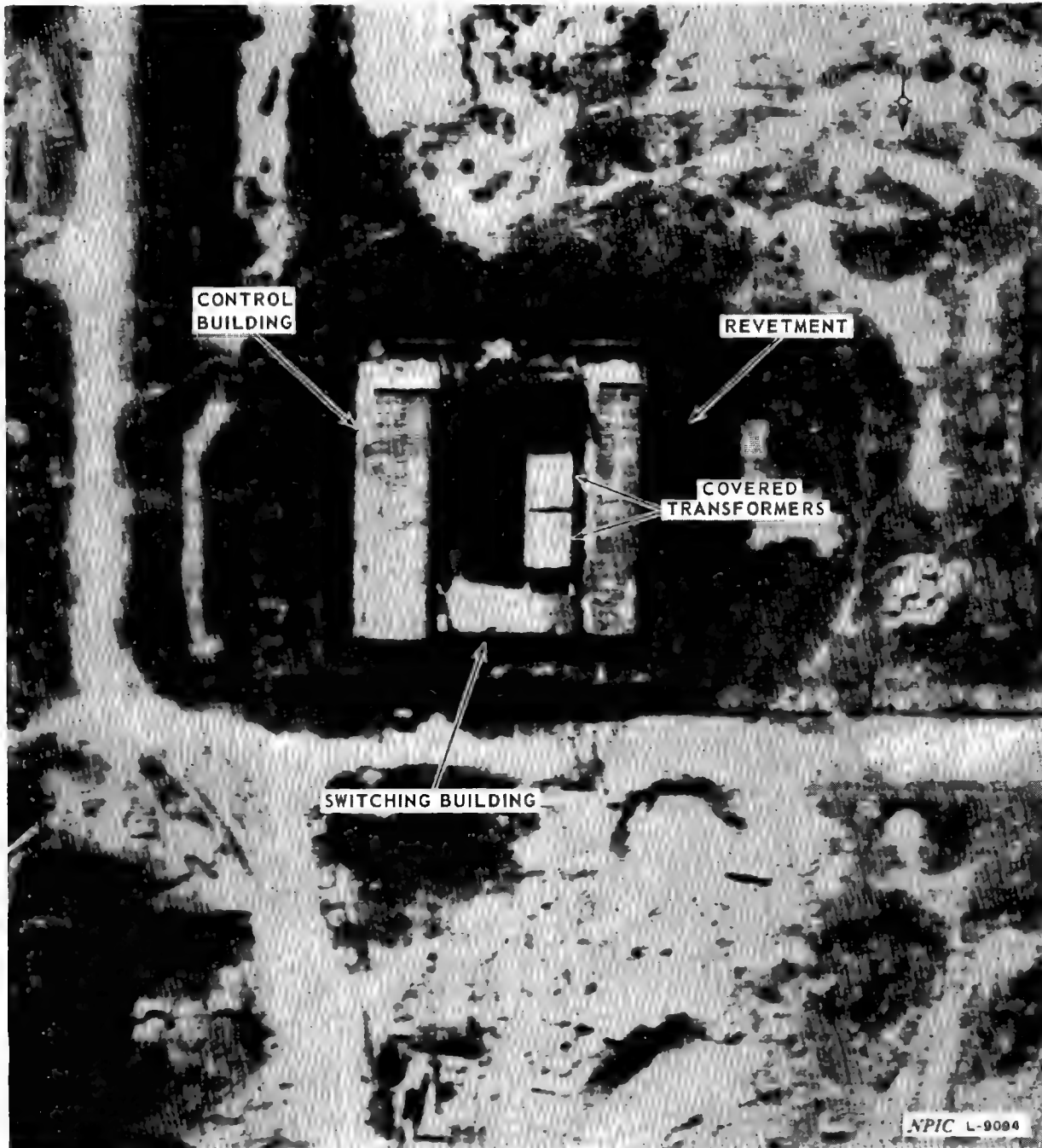
SECRET

25X1C

R-146/67

THAI NGUYEN TRANSFORMER SUBSTATION STEEL PLANT  
WJ906834  
UTM COORDINATES

21-33-19N 105-52-36E  
GEOGRAPHIC COORDINATES



SECRET

25X1A

[REDACTED]  
BE NUMBER

XJ873364  
UTM COORDINATES

21-07-18N 106-48-16E  
GEOGRAPHIC COORDINATES

NAME: VANG DANG TRANSFORMER SUBSTATION

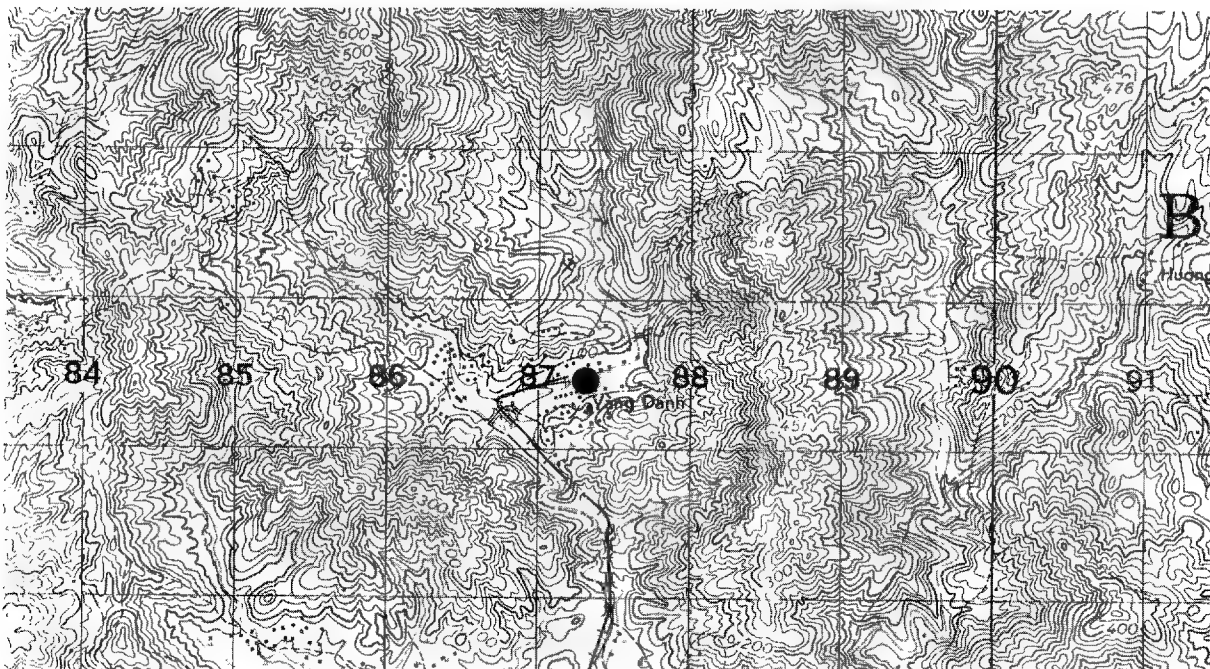
LOCATION: AT VANG DANH 17.2 NM NORTH OF HAI PHONG

DESCRIPTION: THE SUBSTATION IS A SECURED INSTALLATION CONSISTING OF A CONTROL/SWITCHING BUILDING, A TRANSFORMER, AND A SWITCHING YARD. THE TRANSFORMER IS PROTECTED BY BLAST WALLS. TWO 35-KV AND 5 LOW VOLTAGE POWERLINES ARE TIED INTO THE SUBSTATION.

25X1D

PHOTO REFERENCES: [REDACTED]

MAP REFERENCES: AMS SERIES L7014, SHEET 6351-II, 1ST ED, 1965 (U)  
AMS SERIES JOG(G) 1501, SHEET NF 48-12, 1ST ED, 1965 (U)



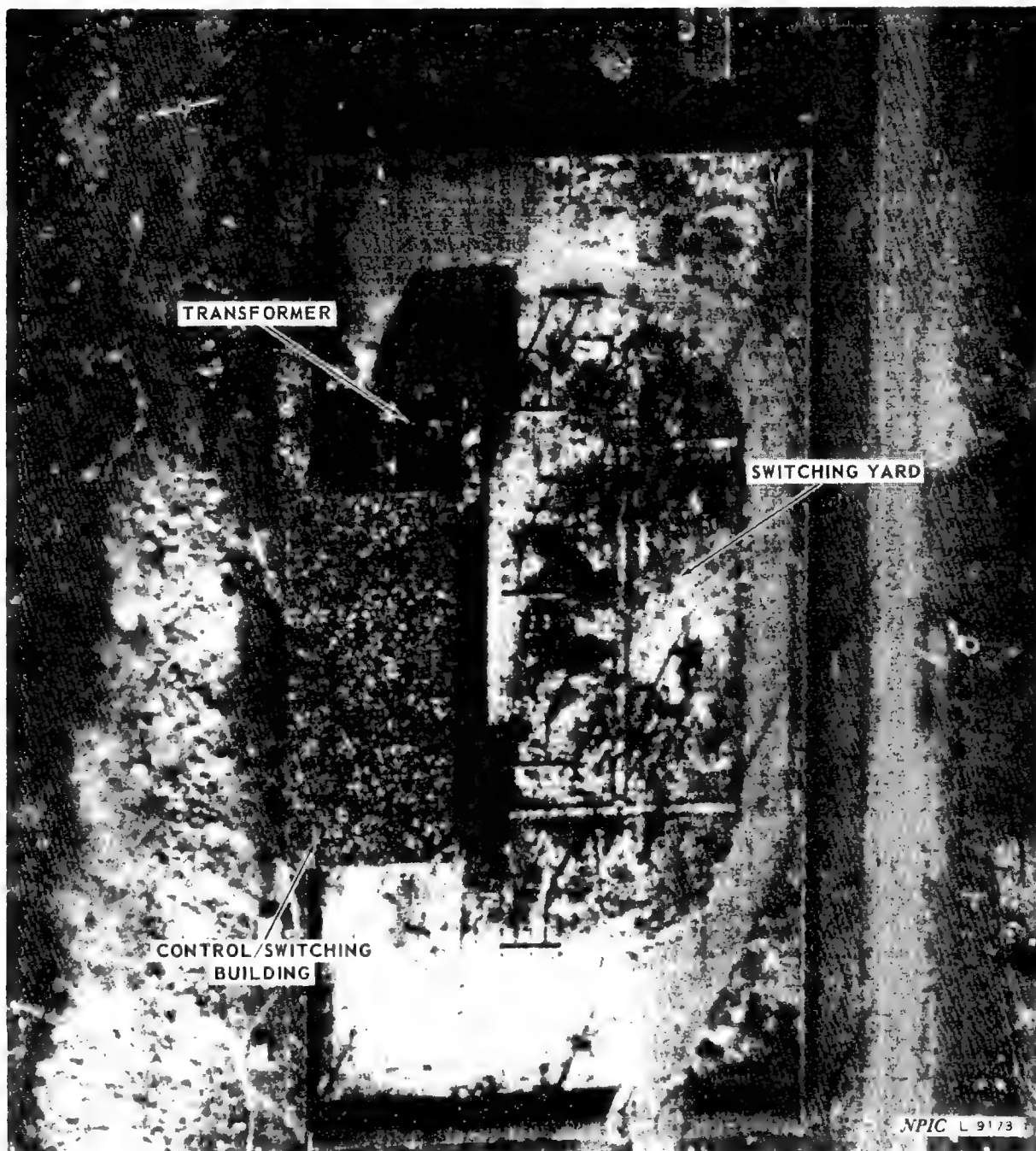
SECRET

25X1C

VANG DANH TRANSFORMER SUBSTATION

XJ873364  
UTM COORDINATES

21-07-18N 106-48-16E  
GEOGRAPHIC COORDINATES



SECRET

NO FOREIGN DISSEM

SECRET

R-146/67

25X1A

BE NUMBER

WF691642  
UTM COORDINATES

18-40-11N 105-39-20E  
GEOGRAPHIC COORDINATES

NAME: VINH (PROBABLE) TRANSFORMER SUBSTATION

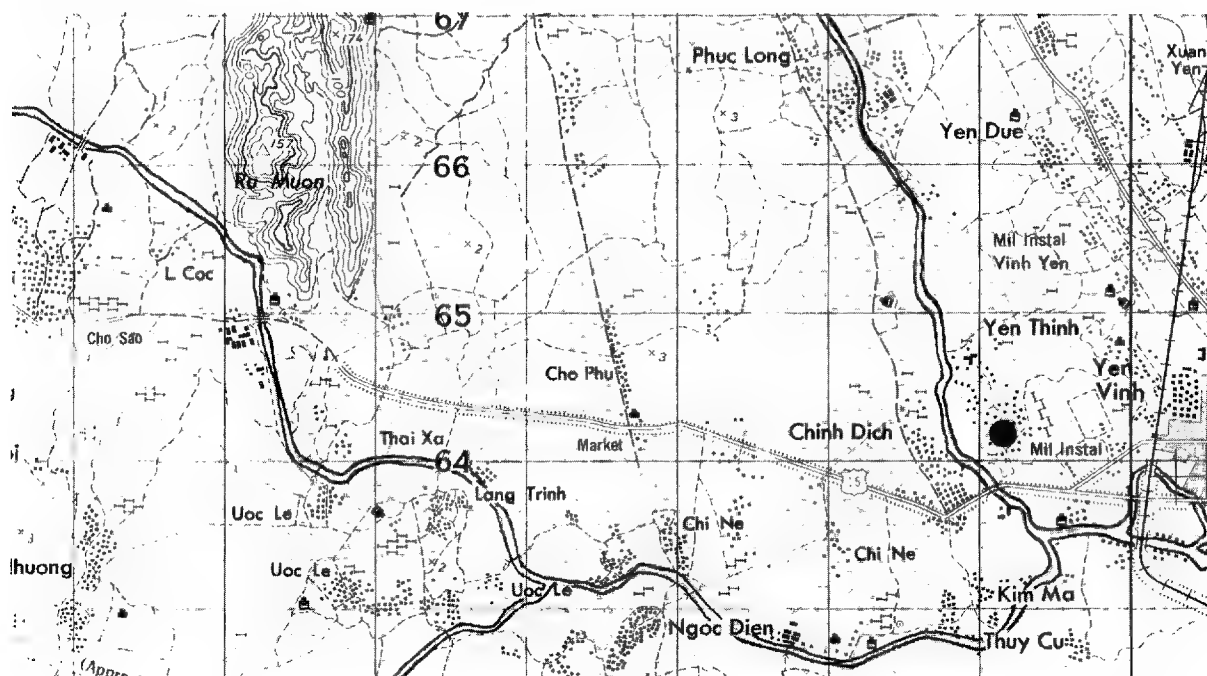
LOCATION: 1 NM WEST OF VINH

DESCRIPTION: THE SUBSTATION CONSISTS OF A TRANSFORMER BUILDING AND A POSSIBLE CONTROL/SWITCHING BUILDING. TWO 35-KV AND 3 LOW VOLTAGE POWERLINES ARE TIED INTO THE SUBSTATION.

25X1D

PHOTO REFERENCES:

MAP REFERENCES: AMS SERIES L7014, SHEET 6146-III, 1ST ED, 1965 (U)  
AMS SERIES JOG(G) 1501, SHEET NE 48-7, 1ST ED, 1965 (U)



SECRET

NO FOREIGN DISSEM

25X1C



SECRET

25X1C

R-146/67

VINH (PROBABLE) TRANSFORMER SUBSTATION

WF691642  
UTM COORDINATES

18-40-11N 105-39-20E  
GEOGRAPHIC COORDINATES



D-29

SECRET

25X1C



SECRET

25X1C

R-146/67

25X1A

BE NUMBER

XJ091437  
UTM COORDINATES

21-11-36N 106-03-04E  
GEOGRAPHIC COORDINATES

NAME: BAC NINH TRANSFORMER SUBSTATION

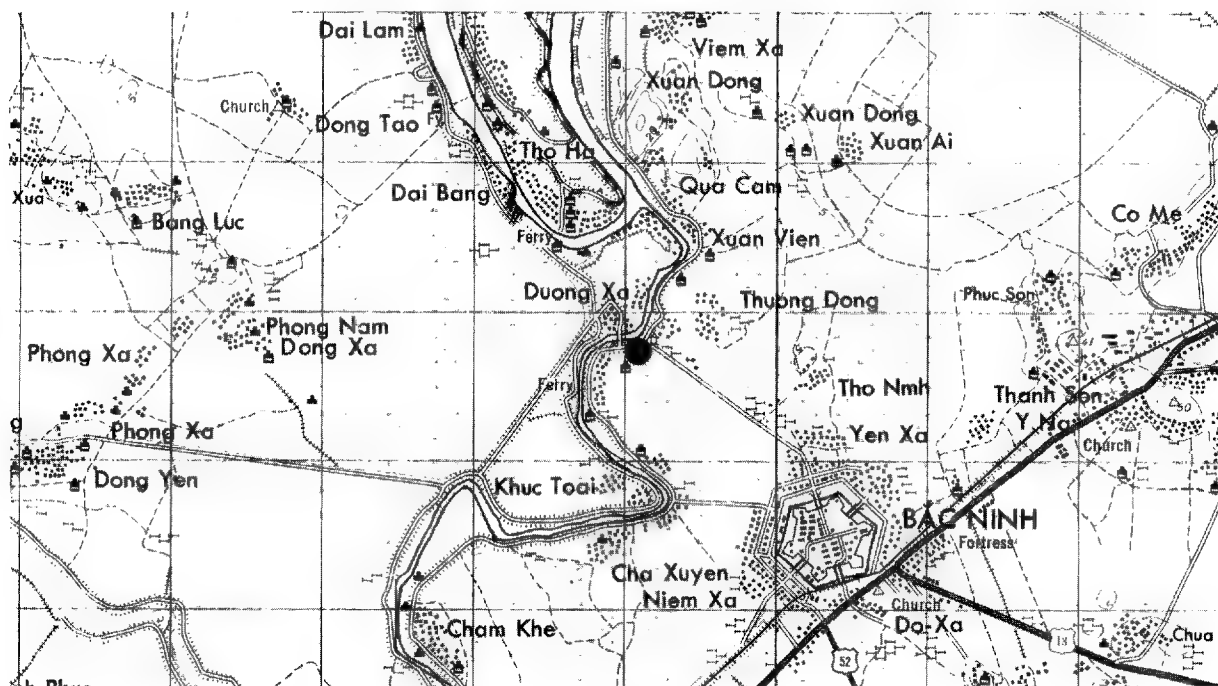
LOCATION: 1.1 NM NW OF BAC DINH

DESCRIPTION: THE SUBSTATION IS A SECURED INSTALLATION CONSISTING OF A CONTROL BUILDING, A TRANSFORMER, AND A SWITCHING YARD. TWO 35-KV AND 2 LOW VOLTAGE POWERLINES ARE TIED INTO THE INSTALLATION.

25X1D

PHOTO REFERENCES:

MAP REFERENCES: AMS SERIES L7014, SHEET 6251-III, 1ST ED, 1965 (U)  
AMS SERIES JOG(G) 1501, SHEET NF 48-11, 1ST ED, 1965 (U)



D-30

SECRET

25X1C

XJ091437  
UTM COORDINATES

BAC NINH TRANSFORMER SUBSTATION

21-11-36N 106-03-04E  
GEOGRAPHIC COORDINATES



D-31

NO FOREIGN DISSEM

25X1A

BE NUMBER

XJ571175  
UTM COORDINATES

20-57-10N 106-30-37E  
GEOGRAPHIC COORDINATES

NAME: AN THAI TRANSFORMER SUBSTATION

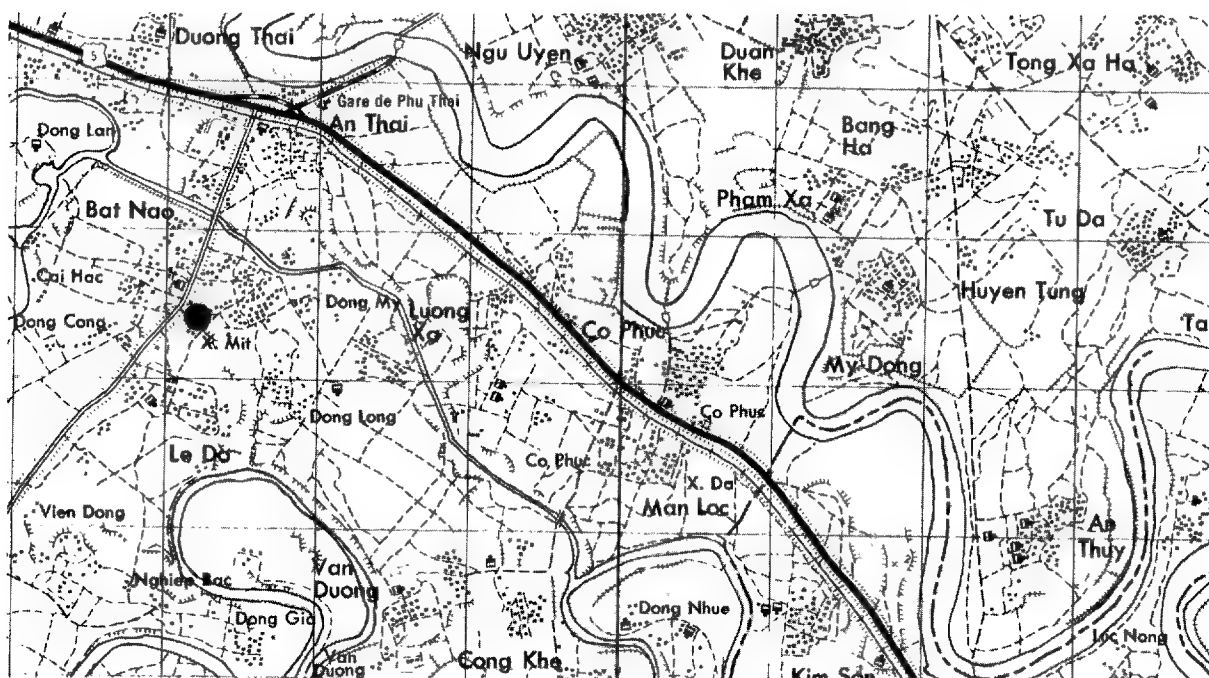
LOCATION: 11.4 NM WNW OF HAI PHONG

DESCRIPTION: THE SUBSTATION IS A SECURED INSTALLATION CONSISTING OF A CONTROL BUILDING, A TRANSFORMER, AND A SWITCHING YARD. TWO 35-KV AND 2 LOW VOLTAGE POWERLINES ARE TIED INTO THIS SUBSTATION.

25X1D

PHOTO REFERENCES:

MAP REFERENCES: AMS SERIES L7014, SHEET 6350-IV, 1ST ED, 1965 (U)  
AMS SERIES JOG(G) 1501, SHEET NF 48-16, 1ST ED, 1965 (U)



NO FOREIGN DISSEM

SECRET

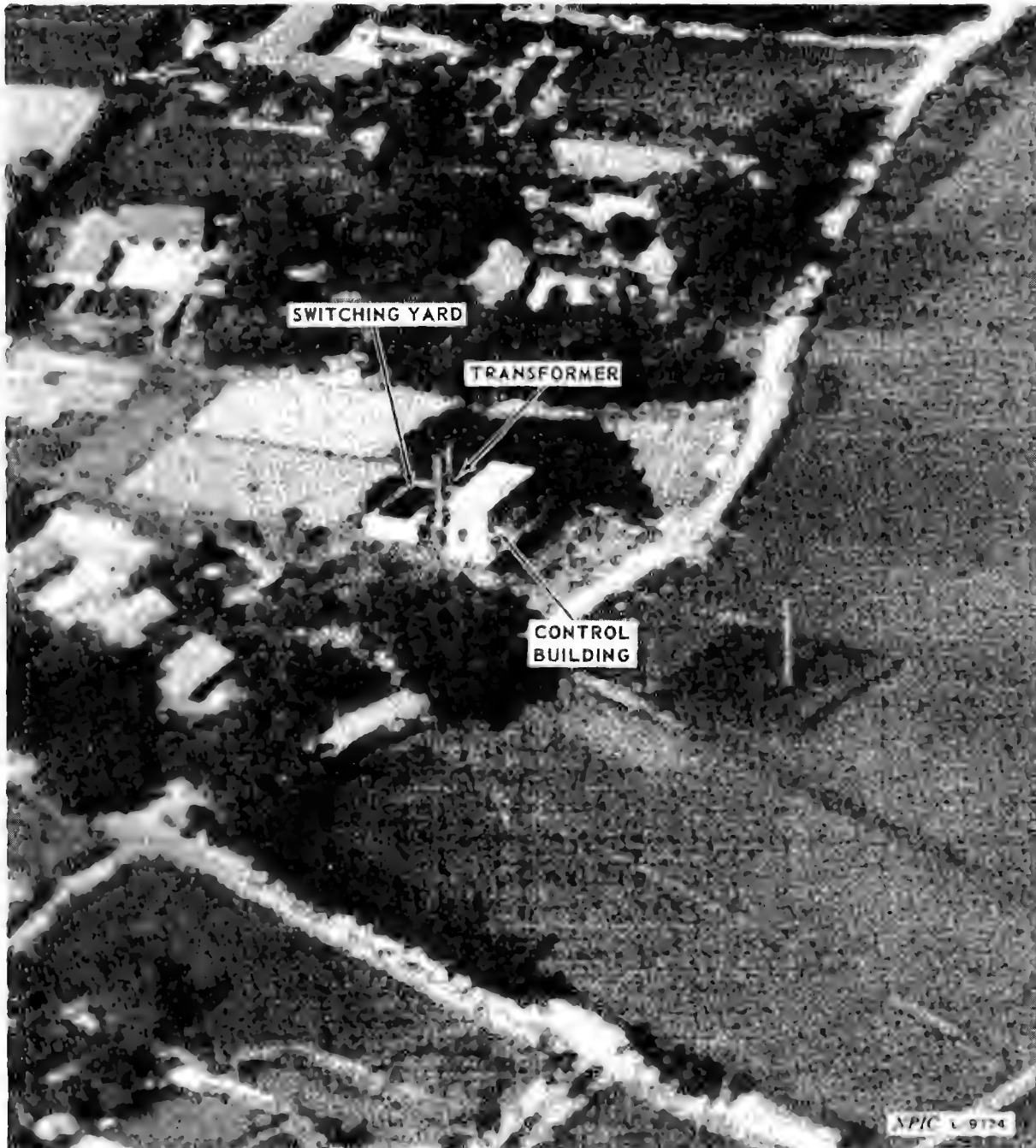
25X1C

R-146/67

XJ571175  
UTM COORDINATES

AN THAI TRANSFORMER SUBSTATION

20-57-10N 106-30-37E  
GEOGRAPHIC COORDINATES



D-33

SECRET

25X1C

SECRET

25X1C

R-146/67

25X1A

BE NUMBER

XJ241713  
UTM COORDINATES

21-26-33N 106-11-55E  
GEOGRAPHIC COORDINATES

NAME: BO HA TRANSFORMER SUBSTATION

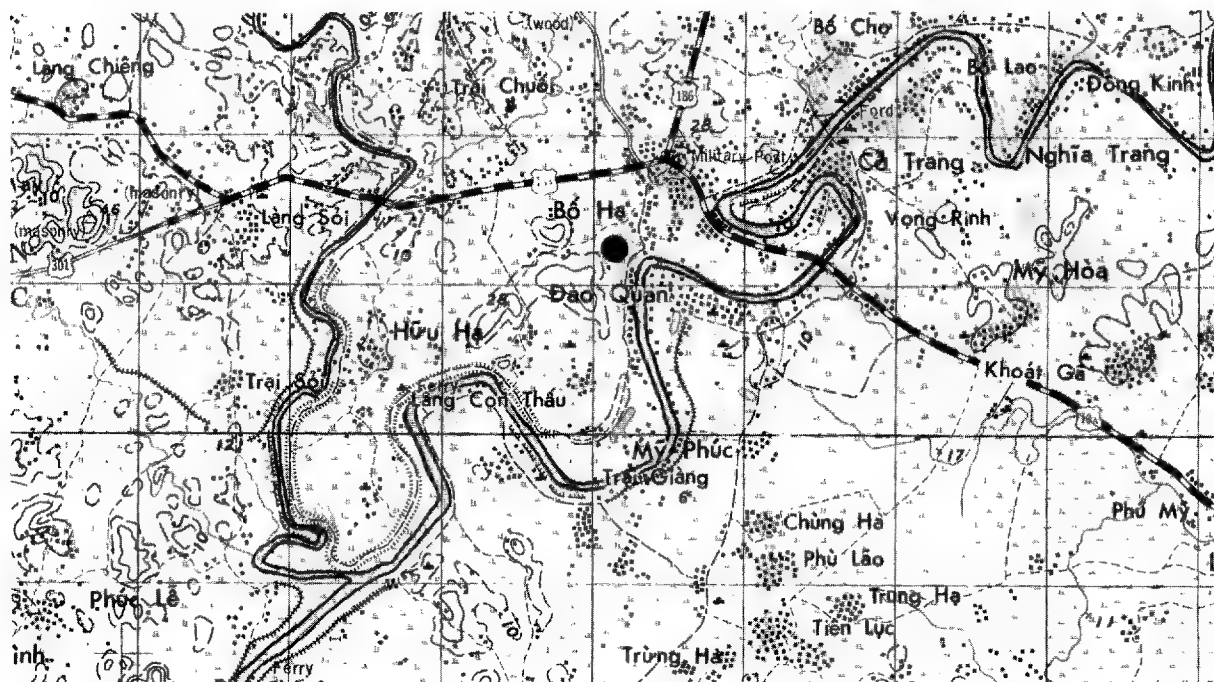
LOCATION: 3.8 NM WEST OF KEP AIRFIELD

DESCRIPTION: THE SUBSTATION IS A SECURED INSTALLATION CONSISTING OF A CONTROL BUILDING, A TRANSFORMER AREA (TRANSFORMERS POSSIBLY NOT INSTALLED AT THIS TIME), AND A SWITCHING YARD. TWO 35-KV AND 2 LOW VOLTAGE POWERLINES ARE TIED INTO THE SUBSTATION.

25X1D

PHOTO REFERENCES:

MAP REFERENCES: AMS SERIES L7014, SHEET 6251-IV, 1ST ED, 1965 (U)  
AMS SERIES JOG(G) 1501, SHEET NF 48-11, 1ST ED, 1965 (U)



D-34

SECRET

25X1C



SECRET

25X1C

R-146/67

XJ241713  
UTM COORDINATES

BO HA TRANSFORMER SUBSTATION

21-26-33N 106-11-55E  
GEOGRAPHIC COORDINATES



D-35

SECRET

25X1C



SECRET

25X1C

R-146/67

25X1A

BE NUMBER

YJ468264  
UTM COORDINATES

21-01-26N 107-22-30E  
GEOGRAPHIC COORDINATES

NAME: CAM PHA PORT TRANSFORMER SUBSTATION

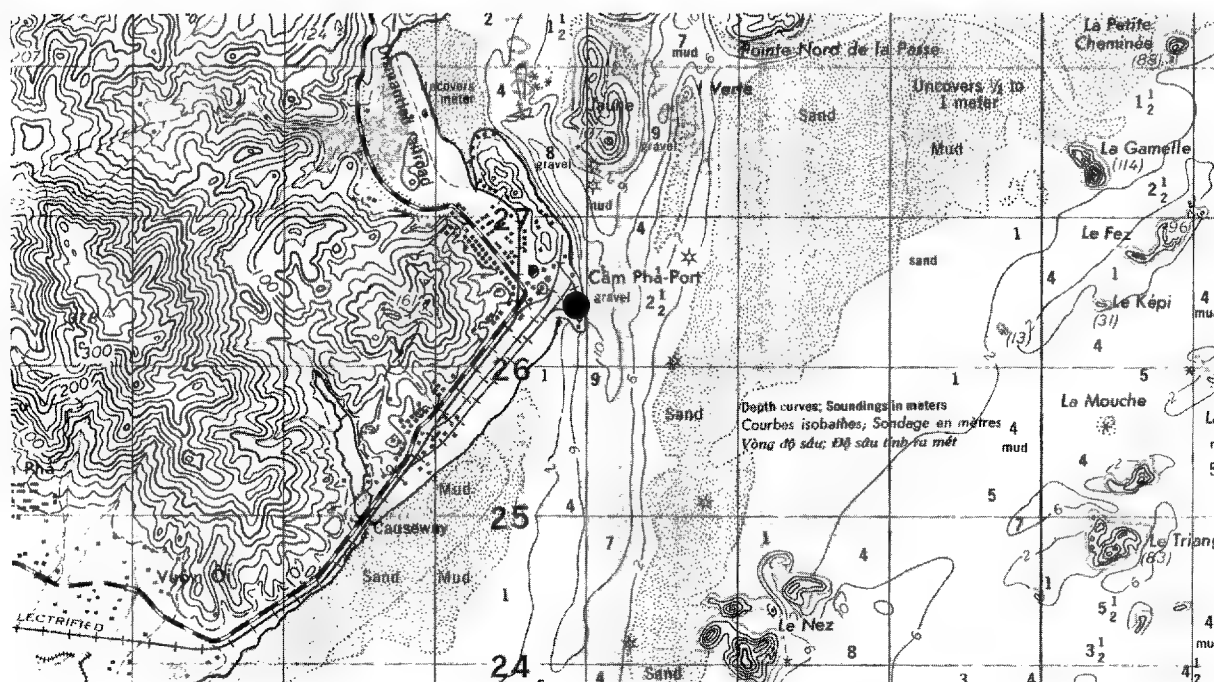
LOCATION: 4.7 NM EAST OF CAM PHA

DESCRIPTION: THE SUBSTATION IS A WALLED FACILITY CONTAINING A CONTROL BUILDING (PROBABLY HOUSING SWITCHING EQUIPMENT AND A STEPDOWN TRANSFORMER). ONE 35-KV AND 2 LOW VOLTAGE POWERLINES ARE TIED INTO THE SUBSTATION.

25X1D

PHOTO REFERENCES:

MAP REFERENCES: AMS SERIES L7014, SHEET 6451-II, 1ST ED, 1965 (U)  
AMS SERIES JOG(G) 1501, SHEET NF 48-12, 1ST ED, 1965 (U)



D-36

SECRET

25X1C

SECRET

25X1C

R-146/67

YJ468264  
UTM COORDINATES

CAM PHA PORT TRANSFORMER SUBSTATION

21-01-26N 107-22-30E  
GEOGRAPHIC COORDINATES



D-37

SECRET

25X1C

SECRET

25X1C

R-146/67

25X1A

BE NUMBER

WJ743943  
UTM COORDINATES

21-39-09N 105-43-05E  
GEOGRAPHIC COORDINATES

NAME: THAI NGUYEN TRANSFORMER SUBSTATION CO LOUNG

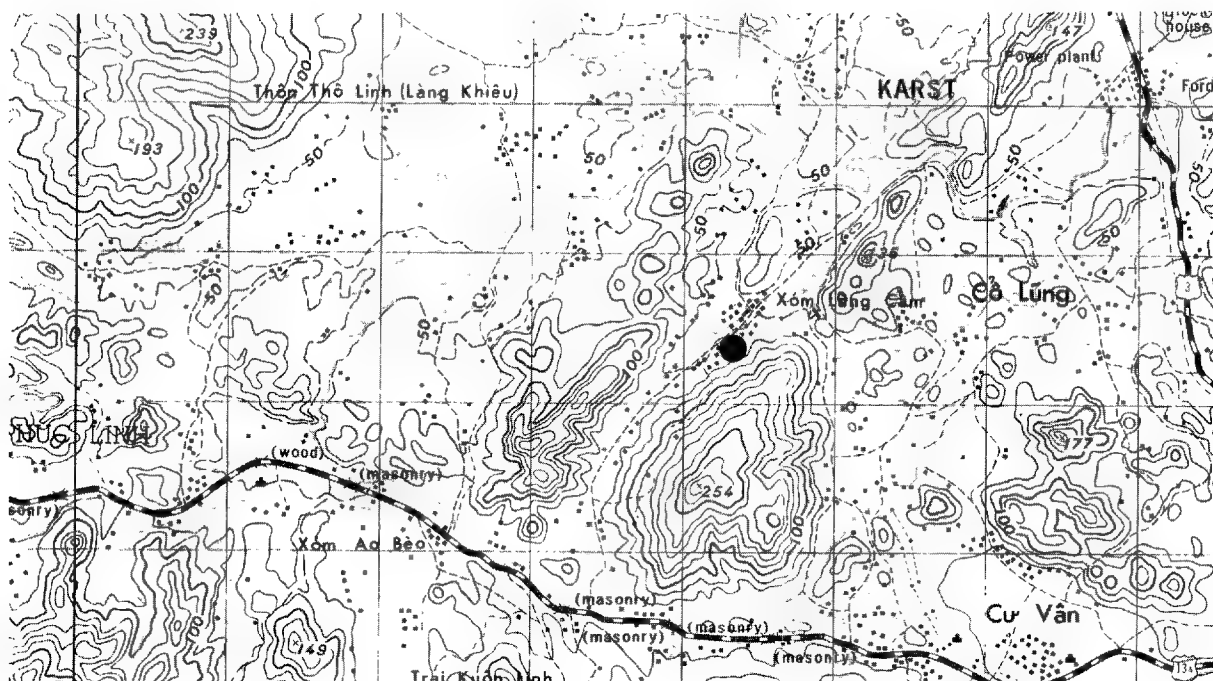
LOCATION: 4.1 NM NW OF THAI NGUYEN

DESCRIPTION: THE SUBSTATION CONSISTS OF A CONTROL/TRANSFORMER BUILDING AND A SWITCHING YARD. THIS INSTALLATION PROBABLY SERVES THE SURROUNDING COMMUNITY AND SMALL INDUSTRY. TWO 35-KV AND 4 LOW VOLTAGE POWERLINES ARE TIED INTO THE SUBSTATION.

25X1D

PHOTO REFERENCES:

MAP REFERENCES: AMS SERIES L7014, SHEET 6152-III, 1ST ED, 1965 (U)  
AMS SERIES JOG(G) 1501, SHEET NF 48-11, 1ST ED, 1965 (U)



D-38

SECRET

25X1C

SECRET

25X1C

R-146/67

WJ743943  
UTM COORDINATES

THAI NGUYEN TRANSFORMER SUBSTATION CO LOUNG

21-39-09N 105-43-05E  
GEOGRAPHIC COORDINATES



SECRET

BE NUMBER

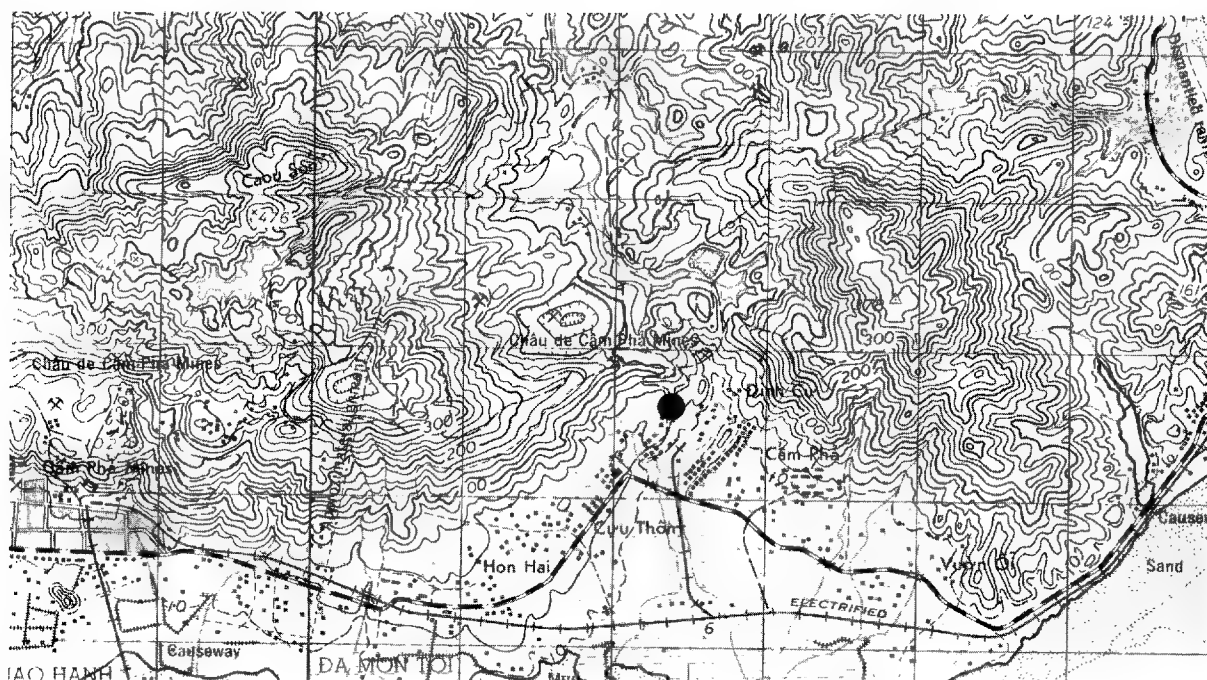
YJ424256

21-01-00N 107-19-55E

DESCRIPTION: THE SUBSTATION IS A SECURED INSTALLATION CONSISTING OF A CONTROL BUILDING, 2 TRANSFORMERS, AND A SWITCHING YARD. ONE 35-KV AND 3 LOW VOLTAGE POWERLINES ARE TIED INTO THE SUBSTATION.

**PHOTO REFERENCES:**

MAP REFERENCES: AMS SERIES L7014, SHEET 6451-II, 1ST ED, 1965 (U)  
AMS SERIES JOG(G) 1501, SHEET NF 48-12, 1ST ED, 1965 (U)





SECRET

25X1C

YJ424256  
UTM COORDINATES

CAM PHA TRANSFORMER SUBSTATION DINH CU

21-01-00N 107-19-55E  
GEOGRAPHIC COORDINATES



D-41

SECRET

25X1C



NO FOREIGN DISSEM

25X1A

BE NUMBER

XH550886  
UTM COORDINATES

20-41-33N 106-29-21E  
GEOGRAPHIC COORDINATES

NAME: NINH GIANG TRANSFORMER SUBSTATION VINH BAO

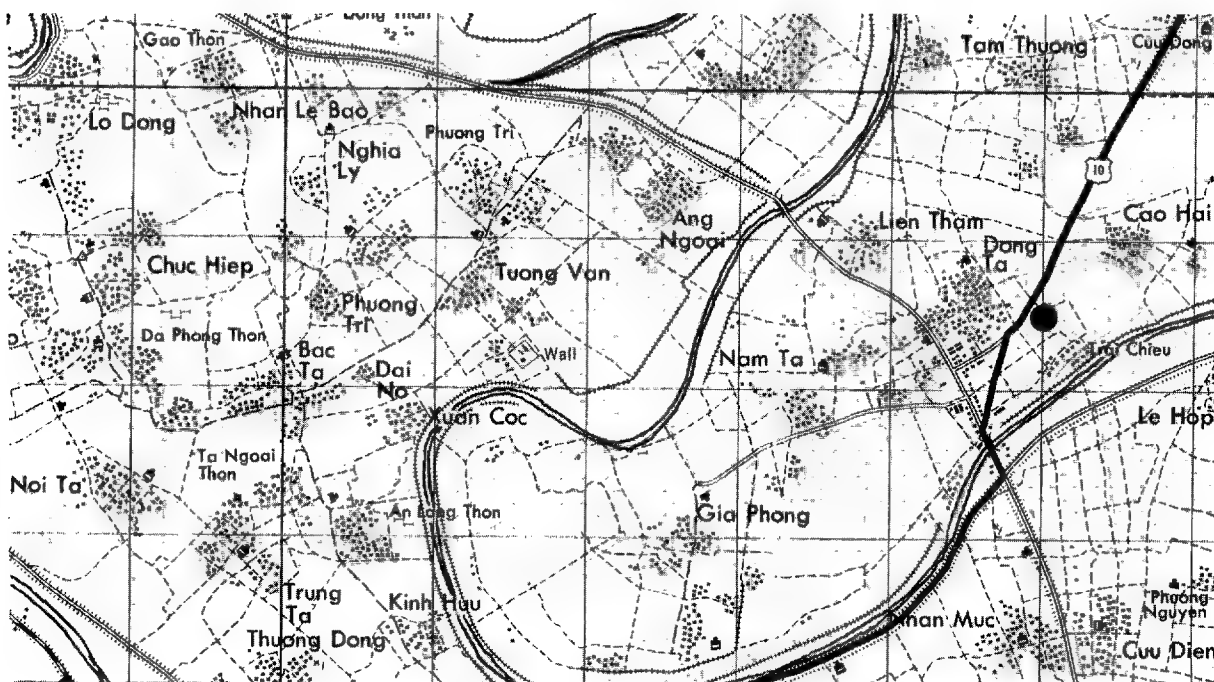
LOCATION: 9.6 NM NW OF NING GIANG

DESCRIPTION: THE SUBSTATION IS A SECURED AREA CONSISTING OF A CONTROL BUILDING, 2 POSSIBLE TRANSFORMERS, AND A SWITCHING YARD. TWO 35-KV AND 2 LOW VOLTAGE POWERLINES ARE TIED INTO THE SUBSTATION.

25X1D

PHOTO REFERENCES:

MAP REFERENCES: AMS SERIES L7014, SHEET 6250-II, 1ST ED, 1965 (U)  
AMS SERIES JOG(G) 1501, SHEET NF 48-15, 1ST ED, 1965 (U)

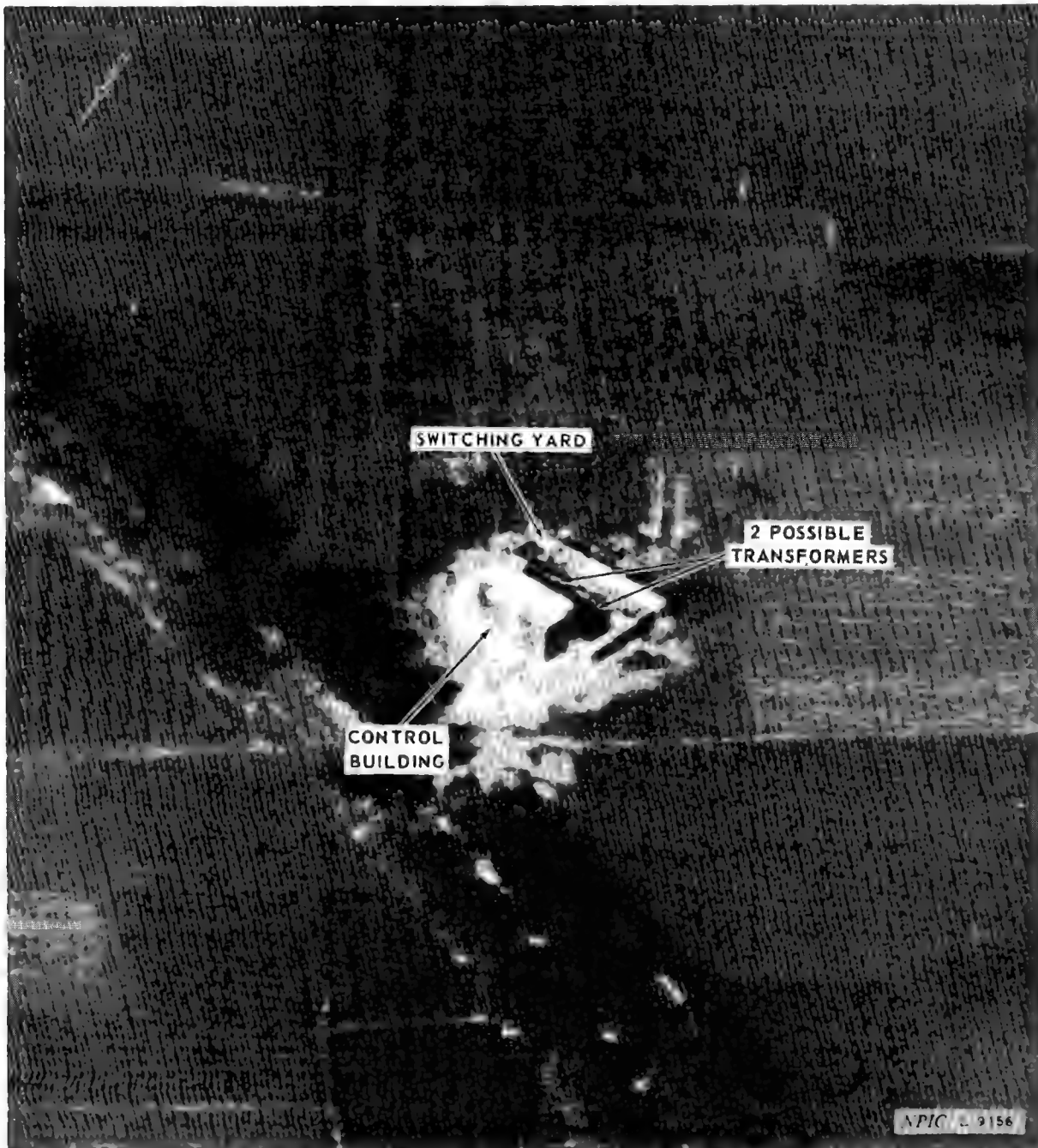


NO FOREIGN DISSEM

NINH GIANG TRANSFORMER SUBSTATION VINH BAO

XH550886  
UTM COORDINATES

20-41-33N 106-29-21E  
GEOGRAPHIC COORDINATES



D-43

NO FOREIGN DISSEM

25X1A

BE NUMBER

XJ389163  
UTM COORDINATES

20-56-38N 106-15-10E  
GEOGRAPHIC COORDINATES

NAME: HAI DUONG TRANSFORMER SUBSTATION

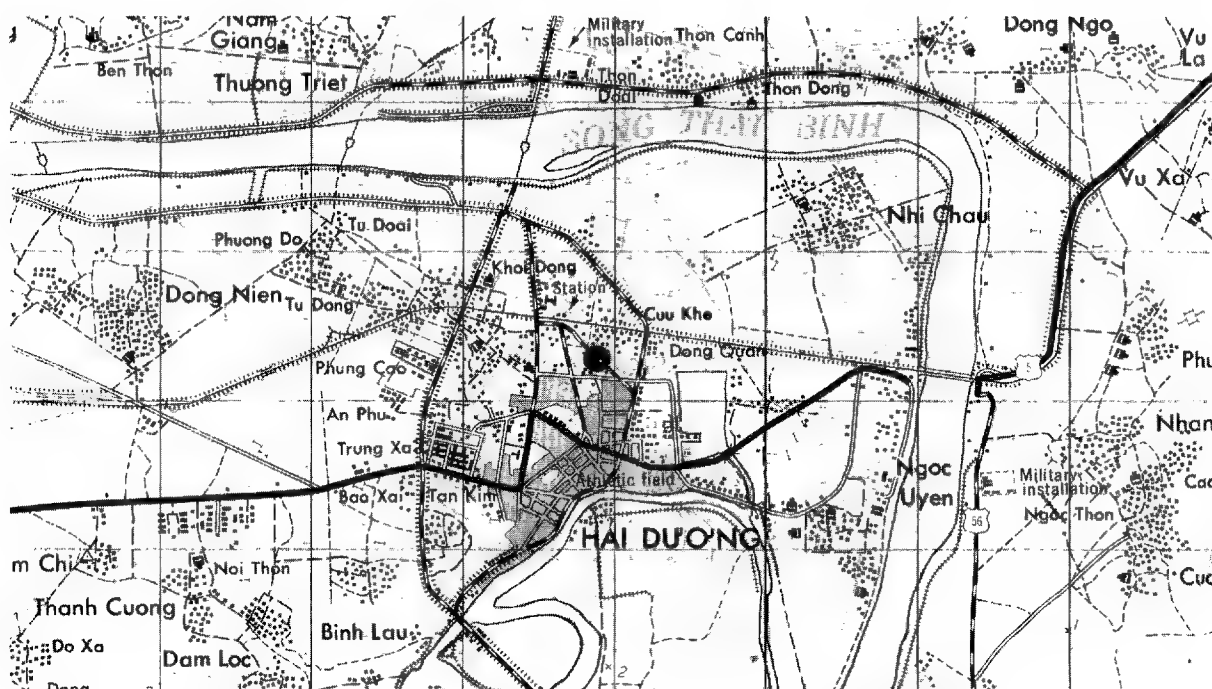
LOCATION: 0.3 NM NORTH OF HAI DUONG

DESCRIPTION: THE SUBSTATION IS A SECURED INSTALLATION CONSISTING OF A CONTROL/SWITCHING BUILDING AND A TRANSFORMER ANNEX. TWO 35-KV AND 3 LOW VOLTAGE POWERLINES ARE TIED INTO THE SUBSTATION.

25X1D

PHOTO REFERENCES:

MAP REFERENCES: AMS SERIES L7014, SHEET 6250-I, 1ST ED, 1965 (U)  
AMS SERIES JOG(G) 1501, SHEET NF 48-15, 1ST ED, 1965 (U)



NO FOREIGN DISSEM

SECRET

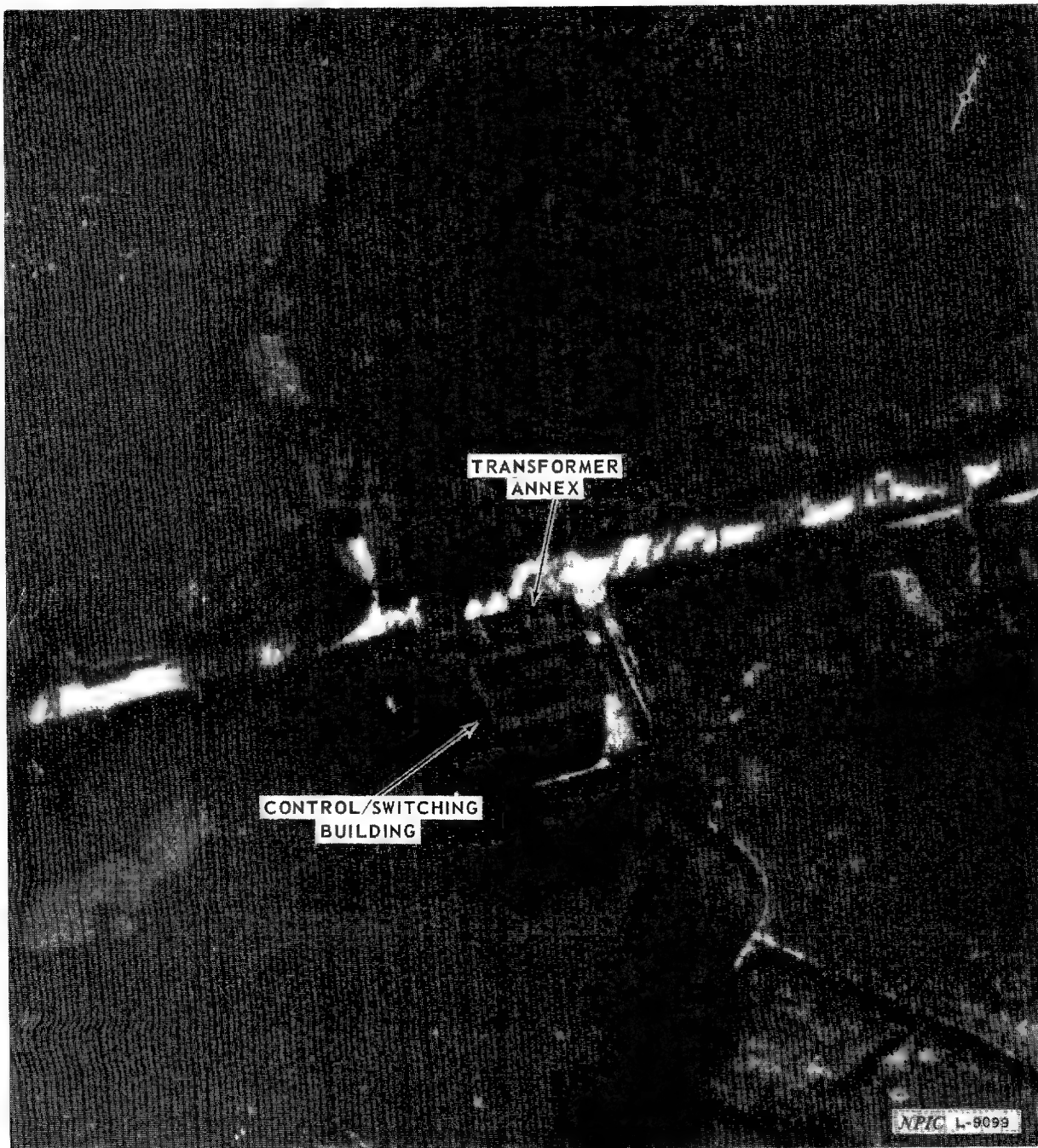
25X1C

R-146/67

XJ389163  
UTM COORDINATES

HAI DUONG TRANSFORMER SUBSTATION

20-56-38N 106-15-10E  
GEOGRAPHIC COORDINATES



D-45

SECRET

25X1C

SECRET

25X1A

[REDACTED]  
BE NUMBER

XJ321646  
UTM COORDINATES

21-22-48N 106-16-30E  
GEOGRAPHIC COORDINATES

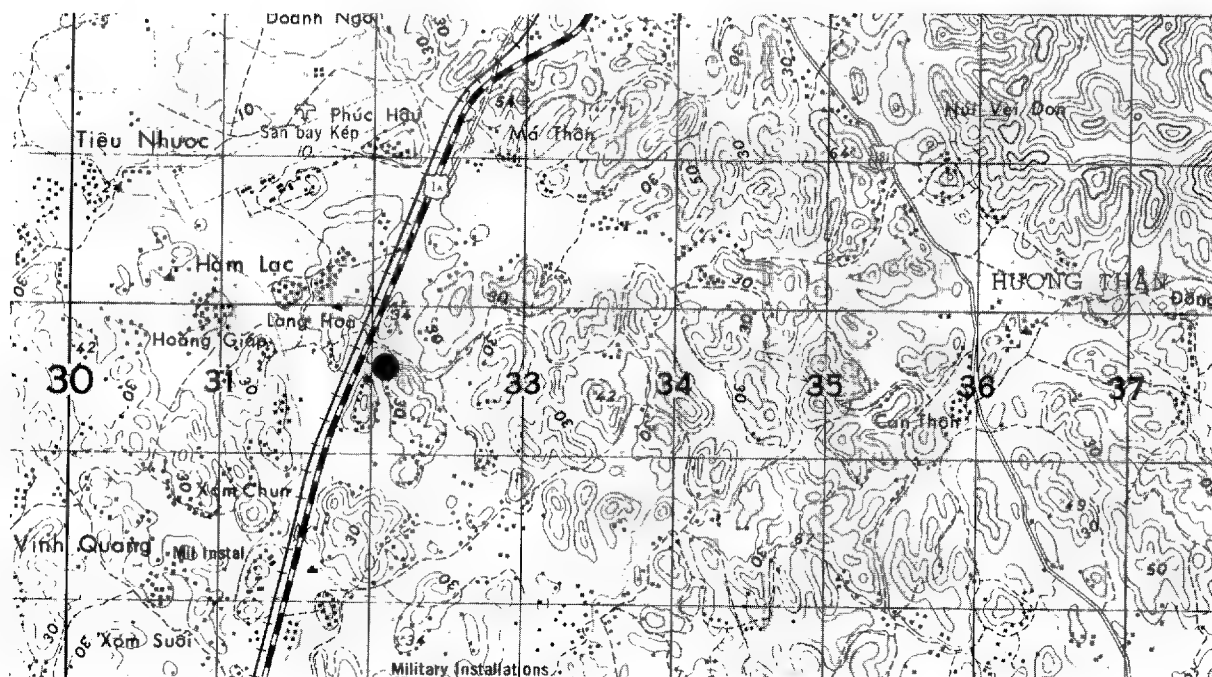
NAME: KEP TRANSFORMER SUBSTATION

LOCATION: 1.6 NM SSW OF KEP

DESCRIPTION: THE PARTIALLY REVETTED SUBSTATION CONSISTS OF A CONTROL/TRANS-  
FORMER/SWITCHING BUILDING WITH A SWITCHING ANNEX. TWO 35-KV AND 3 LOW VOLTAGE  
POWERLINES ARE TIED INTO THE SUBSTATION.

25X1D PHOTO REFERENCES: [REDACTED]

MAP REFERENCES: AMS SERIES L7014, SHEET 6251-I, 1ST ED, 1965 (U)  
AMS SERIES JOG(G) 1501, SHEET NF 48-11, 1ST ED. 1965 (U)



D-46

SECRET



SECRET

25X1C

R-146/67

XJ321646  
UTM COORDINATES

KEP TRANSFORMER SUBSTATION

21-22-48N 106-16-30E  
GEOGRAPHIC COORDINATES



D-47

SECRET

25X1C



SECRET

25X1C

R-146/67

25X1A

BE NUMBER

XJ623037  
UTM COORDINATES

20-49-40N 106-33-38E  
GEOGRAPHIC COORDINATES

NAME: HAI PHONG TRANSFORMER SUBSTATION KHUC GIAN

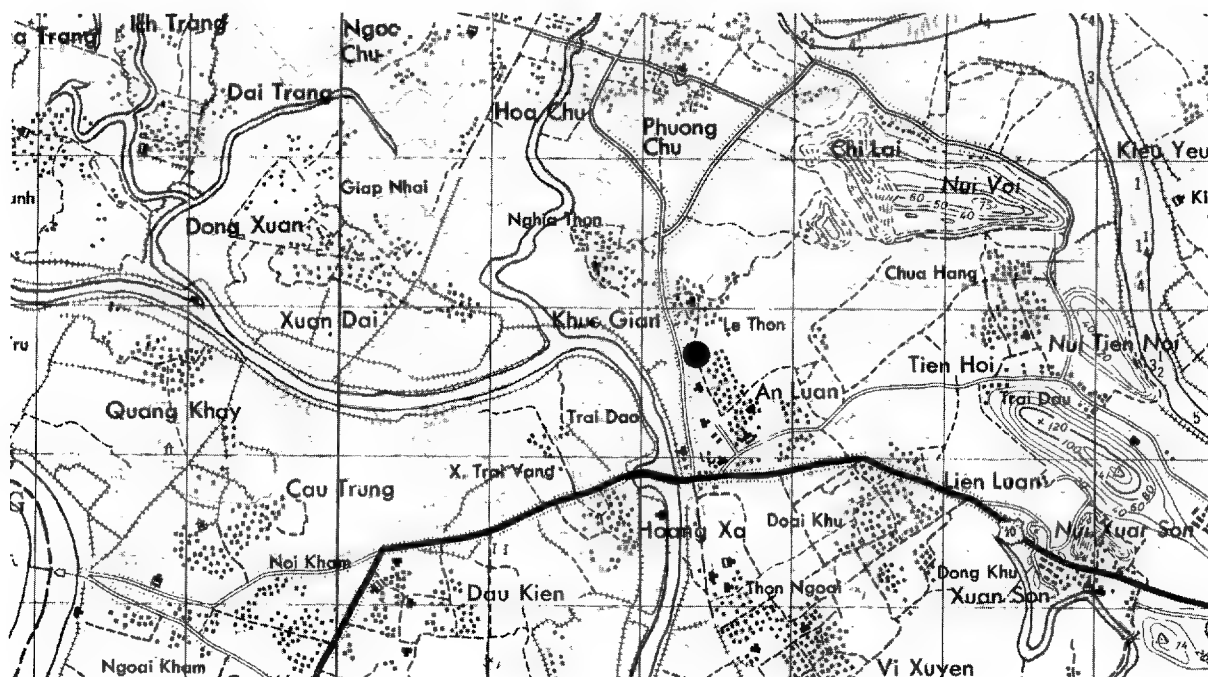
LOCATION: 9.8 NM WEST OF HAIPHONG/CAT BI AIRFIELD

DESCRIPTION: THE SUBSTATION IS A SECURED INSTALLATION CONSISTING OF A CONTROL BUILDING, A SWITCHING YARD, A TRANSFORMER, AND AN AREA FOR A SECOND TRANSFORMER.

25X1D

PHOTO REFERENCES:

MAP REFERENCES: AMS SERIES L7014, SHEET 6350-IV, 1ST ED, 1965 (U)  
AMS SERIES JOG(G) 1501, SHEET NF 48-16, 1ST ED, 1965 (U)



D-48

SECRET

SECRET

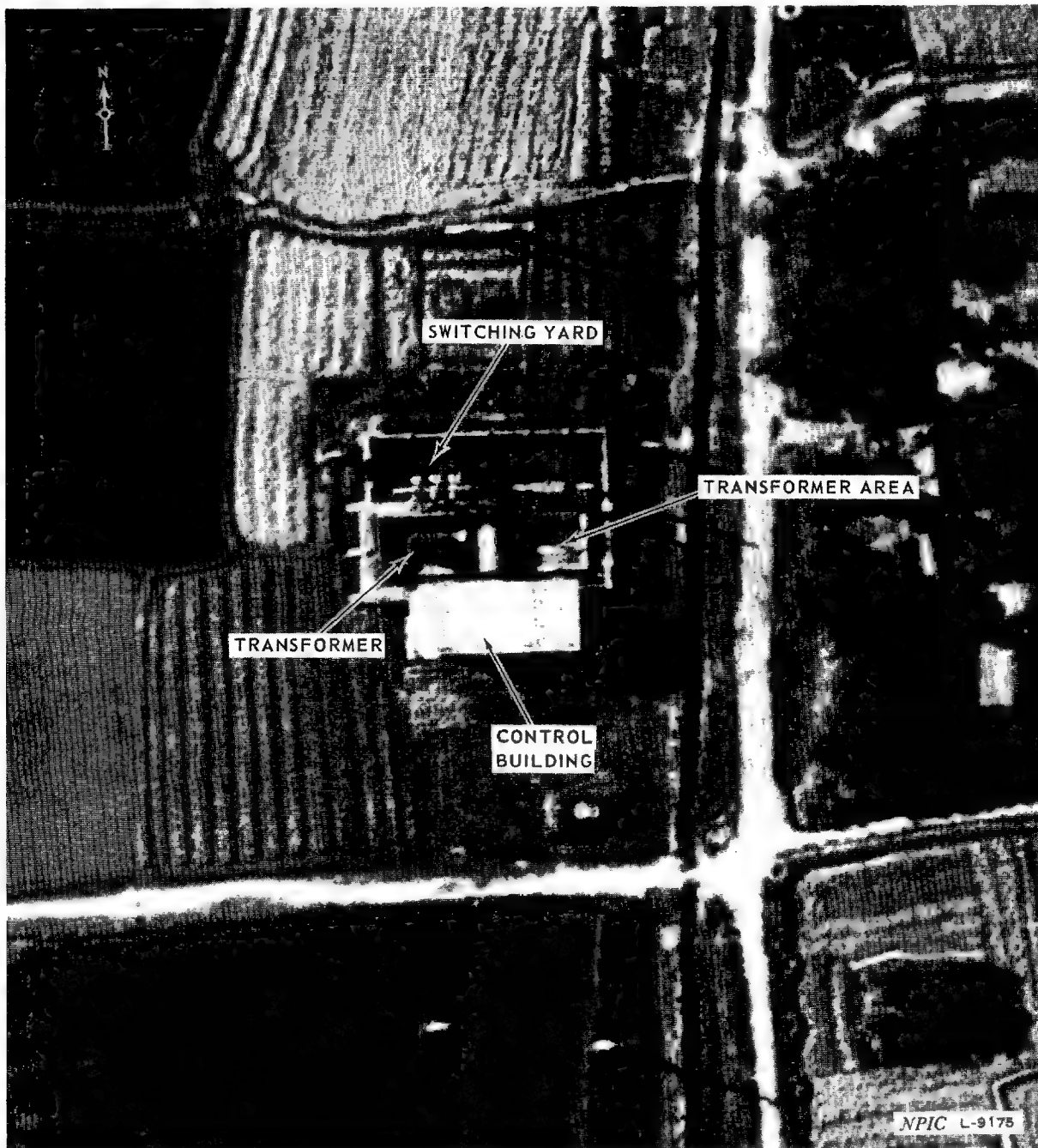
25X1C

R-146/67

XJ623037  
UTM COORDINATES

HAI PHONG TRANSFORMER SUBSTATION KHUC GIAN

20-49-40N 106-33-38E  
GEOGRAPHIC COORDINATES



D-49

SECRET

25X1C

SECRET

25X1C

R-146/67

25X1A

BE NUMBER

XJ698005  
UTM COORDINATES

20-47-54N 106-37-54E  
GEOGRAPHIC COORDINATES

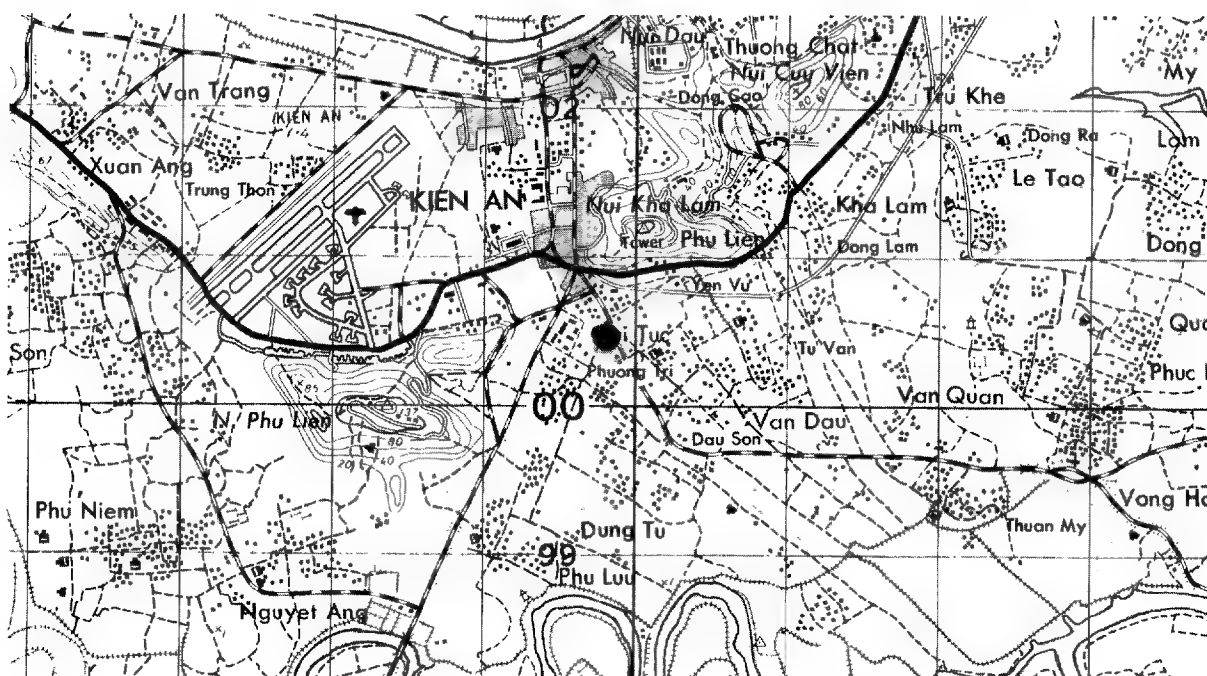
NAME: KIEN AN TRANSFORMER SUBSTATION

LOCATION: 5 NM SSW OF HAI PHONG

DESCRIPTION: THE SUBSTATION IS A SECURED INSTALLATION CONSISTING OF A CONTROL/SWITCHING BUILDING, A TRANSFORMER (WITH BLAST WALL), AND A PROBABLE AREA FOR A SECOND TRANSFORMER.

25X1D PHOTO REFERENCES:

MAP REFERENCES: AMS SERIES L7014, SHEET 6350-IV, 1ST ED, 1965 (U)  
AMS SERIES JOG(G) 1501, SHEET NF 48-16, 1ST ED, 1965 (U)



D-50

SECRET

25X1C

SECRET

25X1C

R-146/67

KIEN AN TRANSFORMER SUBSTATION

XJ698005  
UTM COORDINATES

20-47-54N 106-37-54E  
GEOGRAPHIC COORDINATES



NPIC 1 9176

D-51

SECRET

25X1C

SECRET

25X1G

8-146/67

25X1A

BE NUMBER

XJ473203  
UTM COORDINATES

20-58-45N 106-25-04E  
GEOGRAPHIC COORDINATES

NAME: HAI DUONG TRANSFORMER SUBSTATION THANH LIEN

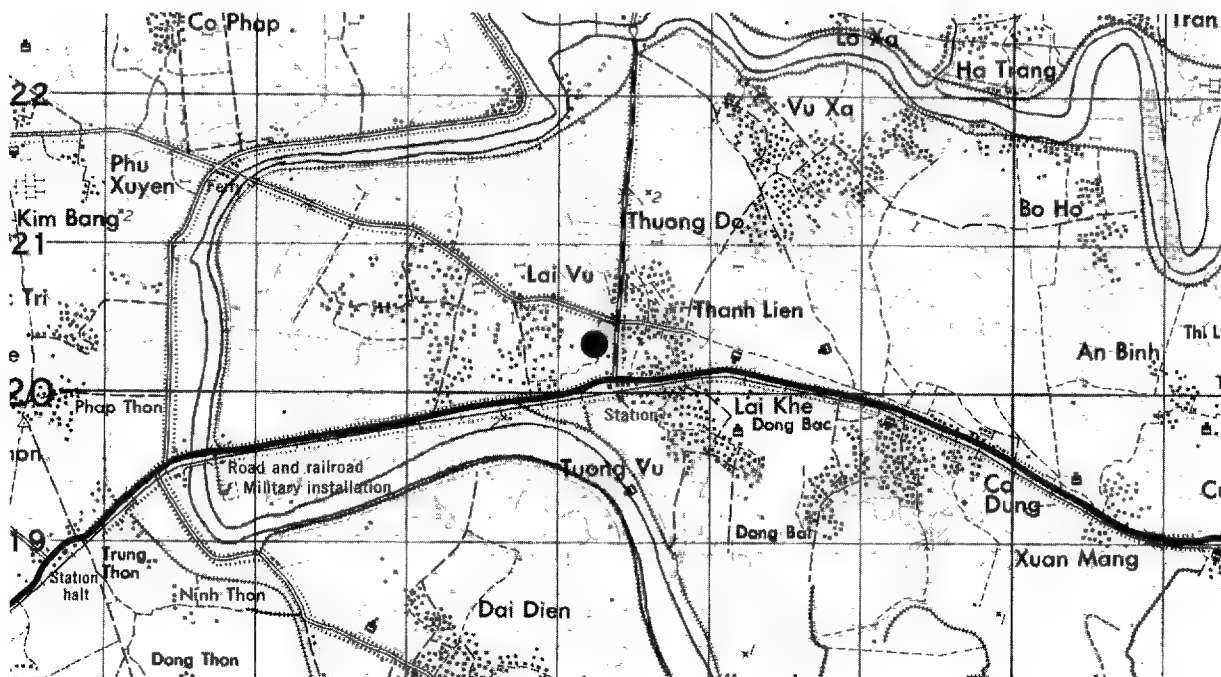
LOCATION: JUST EAST OF LAI VU AND 5.2 NM NE OF HAI DUONG

DESCRIPTION: THE SUBSTATION, LOCATED WITHIN AN OLD FRENCH BUNKER, CONSISTS OF A CONTROL/TRANSFORMER/SWITCHING BUILDING. TWO 35-KV AND 2 LOW VOLTAGE POWERLINES ARE TIED INTO THE SUBSTATION.

25X1D

PHOTO REFERENCES:

MAP REFERENCES: AMS SERIES L7014, SHEET 6250-I, 1ST ED, 1965 (U)  
AMS SERIES JOG(G) 1501, SHEET NF 48-15, 1ST ED, 1965 (U)



D-52

SECRET



SECRET

25X1C

R 146 67

XJ473203  
UTM COORDINATES

HAI DUONG TRANSFORMER SUBSTATION THANH LIEN  
20-58-45N 106-25-04E  
GEOGRAPHIC COORDINATES



D-53

SECRET



SECRET

NO FOREIGN DISSEM

25X1A

BE NUMBER

WJ902213  
UTM COORDINATES

20-59-34N 105-52-05E  
GEOGRAPHIC COORDINATES

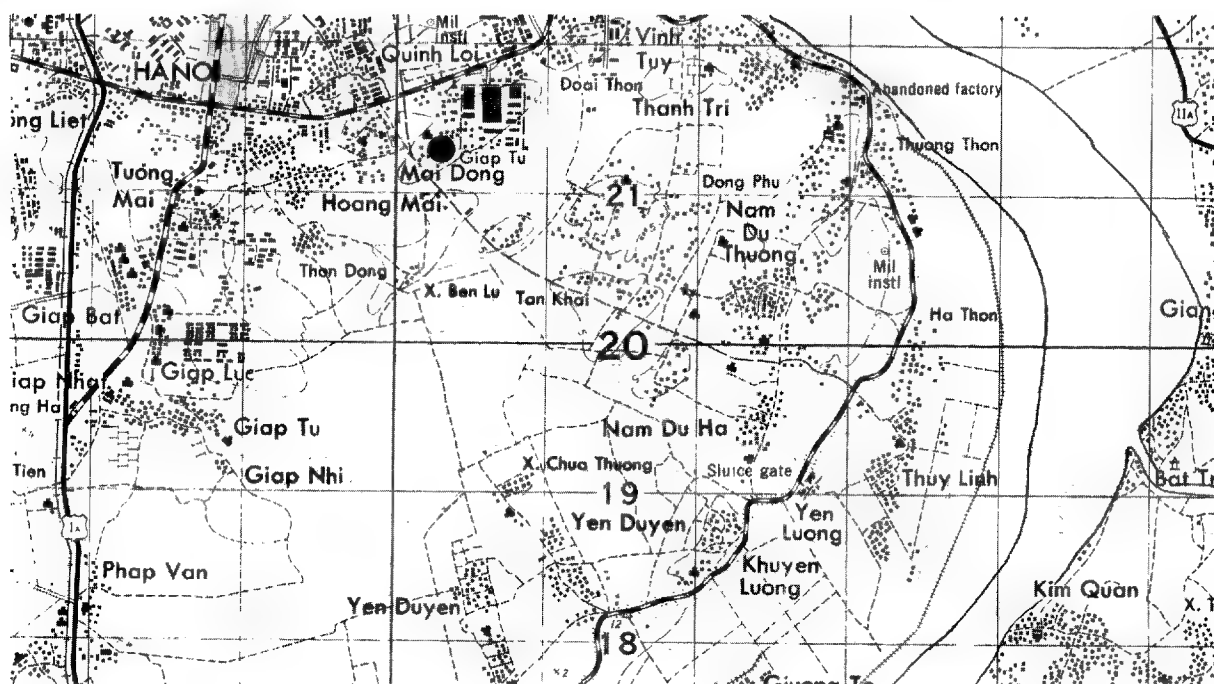
NAME: HA NOI TRANSFORMER SUBSTATION MAI DONG

LOCATION: 1.8 NM EAST OF HANOI/BAC MAI AIRFIELD

DESCRIPTION: THE SUBSTATION IS A SECURED INSTALLATION CONSISTING OF A CONTROL/TRANSFORMER/SWITCHING BUILDING AND A TRANSFORMER AREA CONTAINING 1 TRANSFORMER (NOT CONNECTED) AND 1 UNOCCUPIED TRANSFORMER BASE. FOUR 35-KV LINES ARE TIED INTO THE SUBSTATION.

25X1D PHOTO REFERENCES:

MAP REFERENCES: AMS SERIES L7014, SHEET 6150-I, 1ST ED, 1965 (U)  
AMS SERIES JOG(G) 1501, SHEET NF 48-15, 1ST ED, 1965 (U)



SECRET

25X1C

NO FOREIGN DISSEM

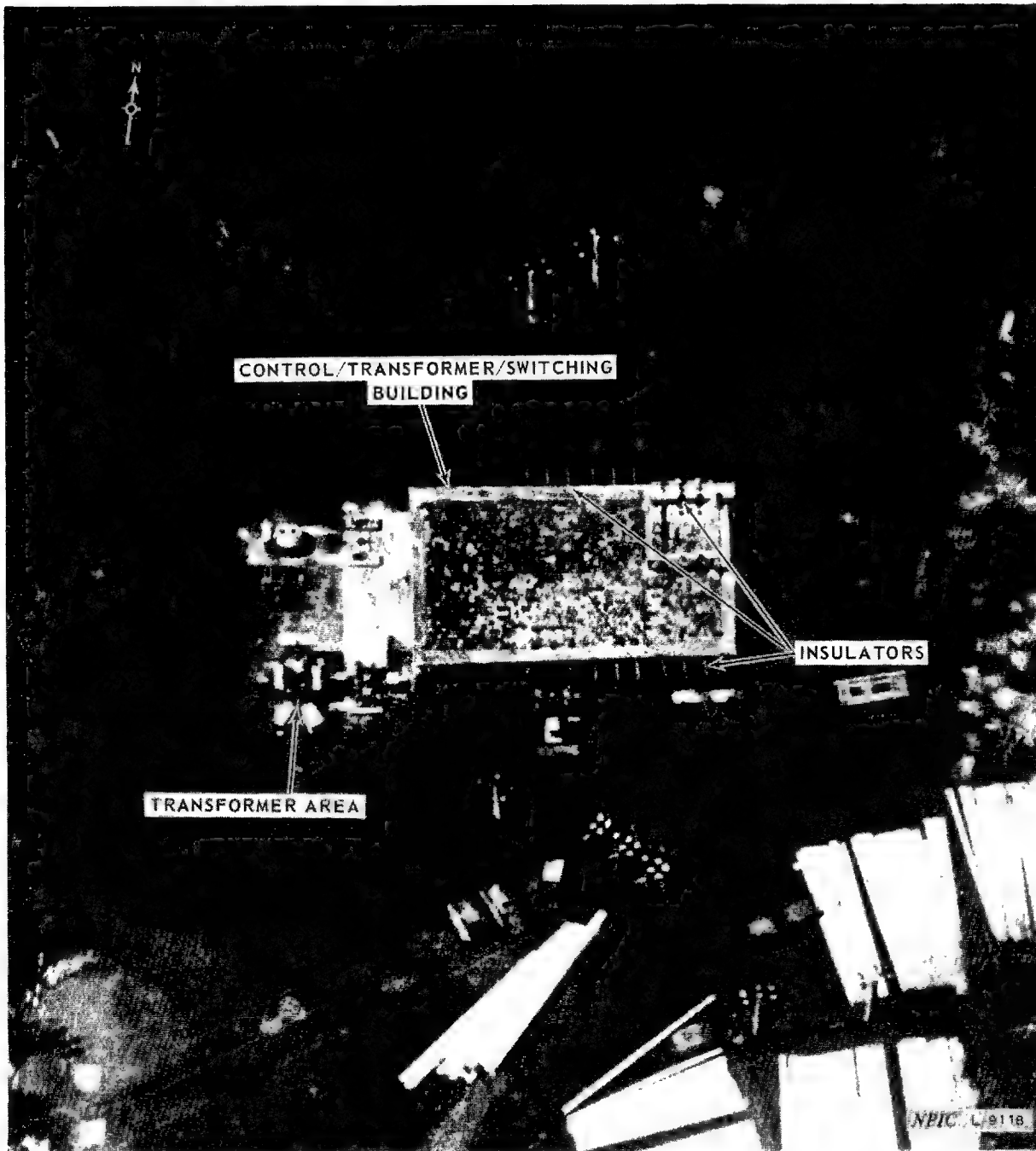
SECRET

25X1C

R-146/67

HA NOI TRANSFORMER SUBSTATION MAI DONG  
WJ902213  
UTM COORDINATES

20-59-34N 105-52-05E  
GEOGRAPHIC COORDINATES



D-55

SECRET

SECRET

25X1C

R-146/67

25X1A

BE NUMBER

XJ683307  
UTM COORDINATES

21-04-18N 106-37-12E  
GEOGRAPHIC COORDINATES

NAME: MAO KHE TRANSFORMER SUBSTATION

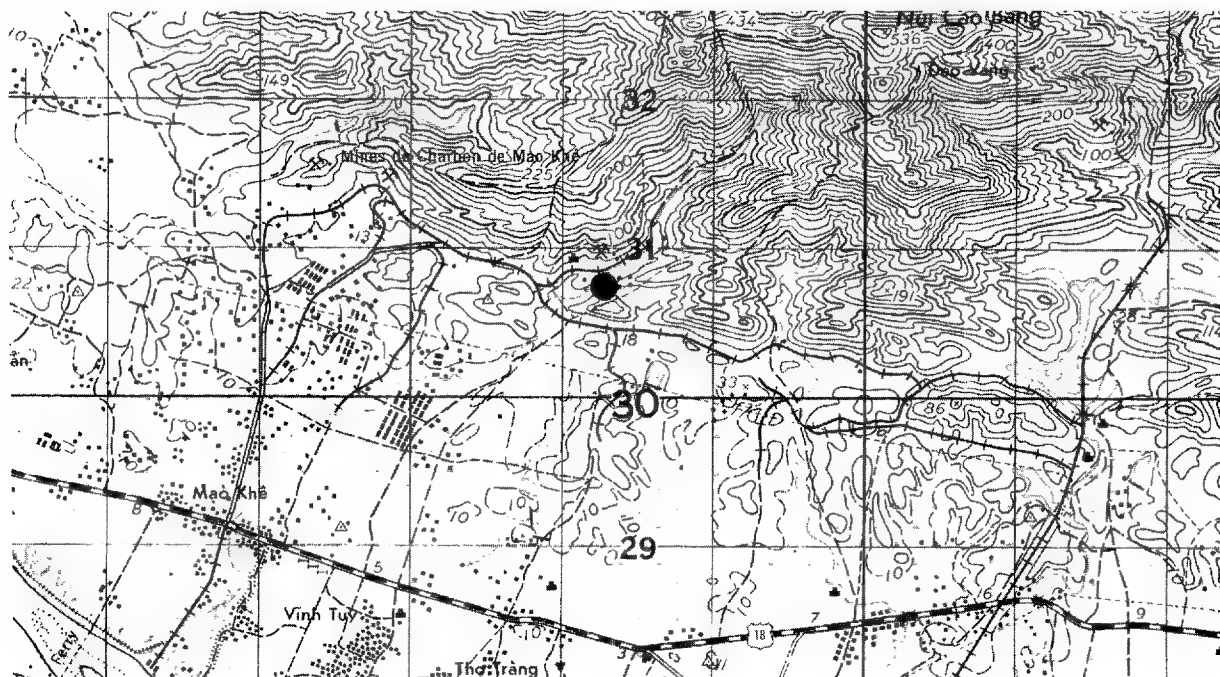
LOCATION: 1.6 NM NE OF MAO KHE AND 13.5 NM NORTH OF HAI PHONG

DESCRIPTION: THE SUBSTATION IS A SECURED INSTALLATION CONSISTING OF A CONTROL BUILDING, A TRANSFORMER SURROUNDED BY A BLAST WALL, AND A SWITCHING YARD. ONE 35-KV AND 3 LOW VOLTAGE POWERLINES ARE TIED INTO THE INSTALLATION.

25X1D

PHOTO REFERENCES:

MAP REFERENCES: AMS SERIES L7014, SHEET 6351-III, 1ST ED, 1965 (U)  
AMS SERIES JOG(G) 1501, SHEET NF 48-12, 1ST ED, 1965 (U)



D-56

SECRET

25X1C

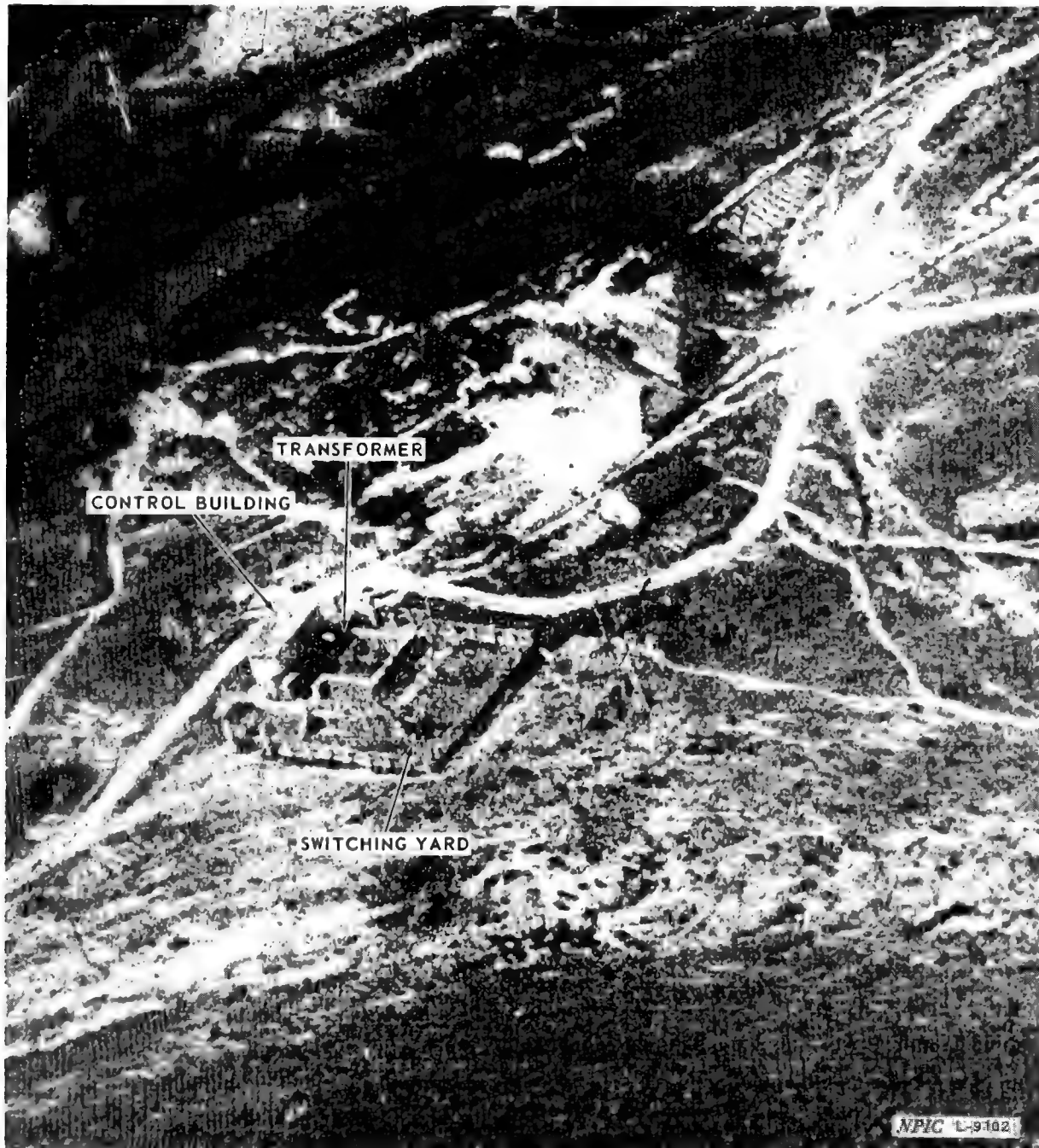
SECRET

25X1C

MAO KHE TRANSFORMER SUBSTATION

XJ683307  
UTM COORDINATES

21-04-18N 106-37-12E  
GEOGRAPHIC COORDINATES



NPIC 1-91021

D-57

SECRET

NO FOREIGN DISSEM

25X1A

BE NUMBER

XJ425982  
UTM COORDINATES

20-46-52N 106-22-07E  
GEOGRAPHIC COORDINATES

NAME: HAI DUONG TRANSFORMER SUBSTATION DO NGHIA

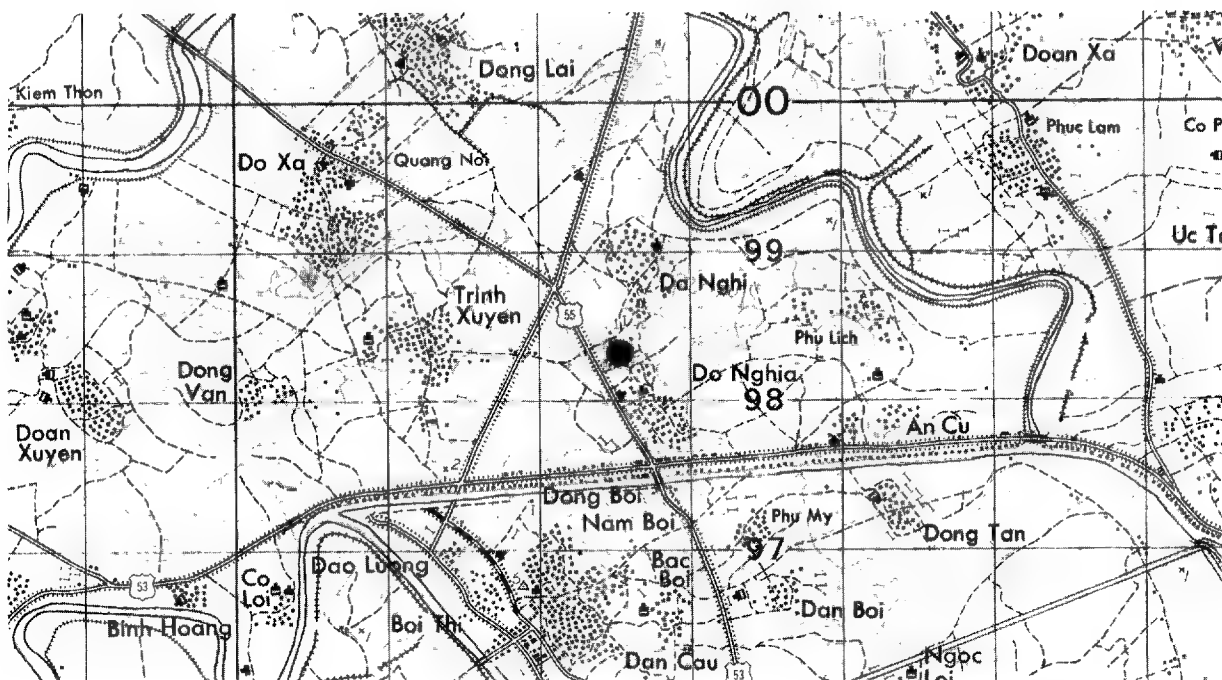
LOCATION: JUST NORTH OF DO NGHIA AND 9.5 NM SSE OF HAI DUONG

DESCRIPTION: THE SUBSTATION IS A REVETTED INSTALLATION CONSISTING OF A CONTROL/TRANSFORMER BUILDING AND A SWITCHING YARD. TWO 35-KV AND 2 LOW VOLTAGE POWERLINES ARE TIED INTO THE SUBSTATION.

25X1D

PHOTO REFERENCES:

MAP REFERENCES: AMS SERIES L7014, SHEET 6250-I, 1ST ED, 1965 (U)  
AMS SERIES JOG(G) 1501, SHEET NF 48-15, 1ST ED, 1965 (U)



D-58

SECRET

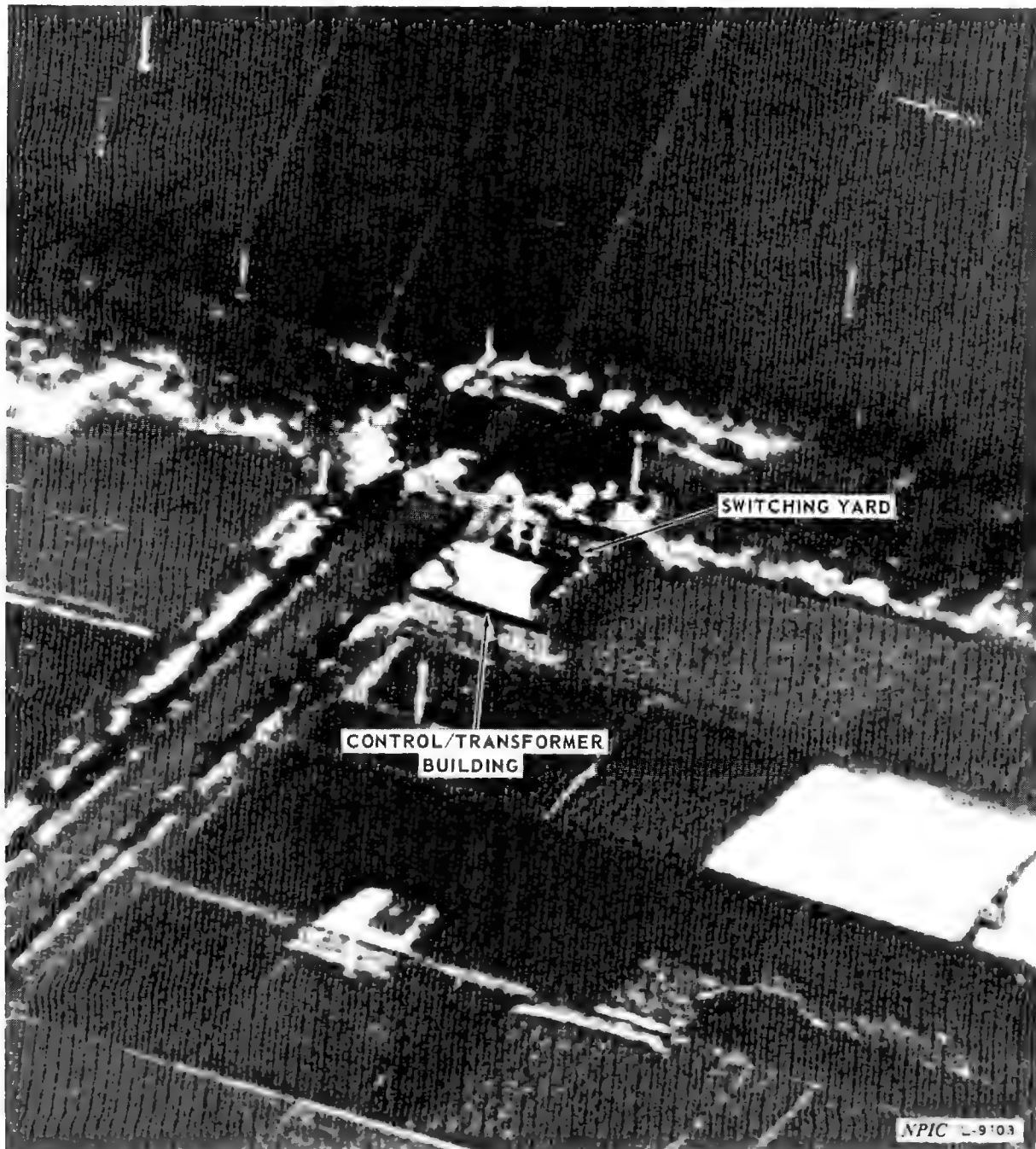
25X1C

NO FOREIGN DISSEM

SECRET

XJ425982  
UTM COORDINATES

HAI DUONG TRANSFORMER SUBSTATION DO NGHIA  
20-46-52N 106-22-07E  
GEOGRAPHIC COORDINATES



D-59

SECRET



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BE NUMBER

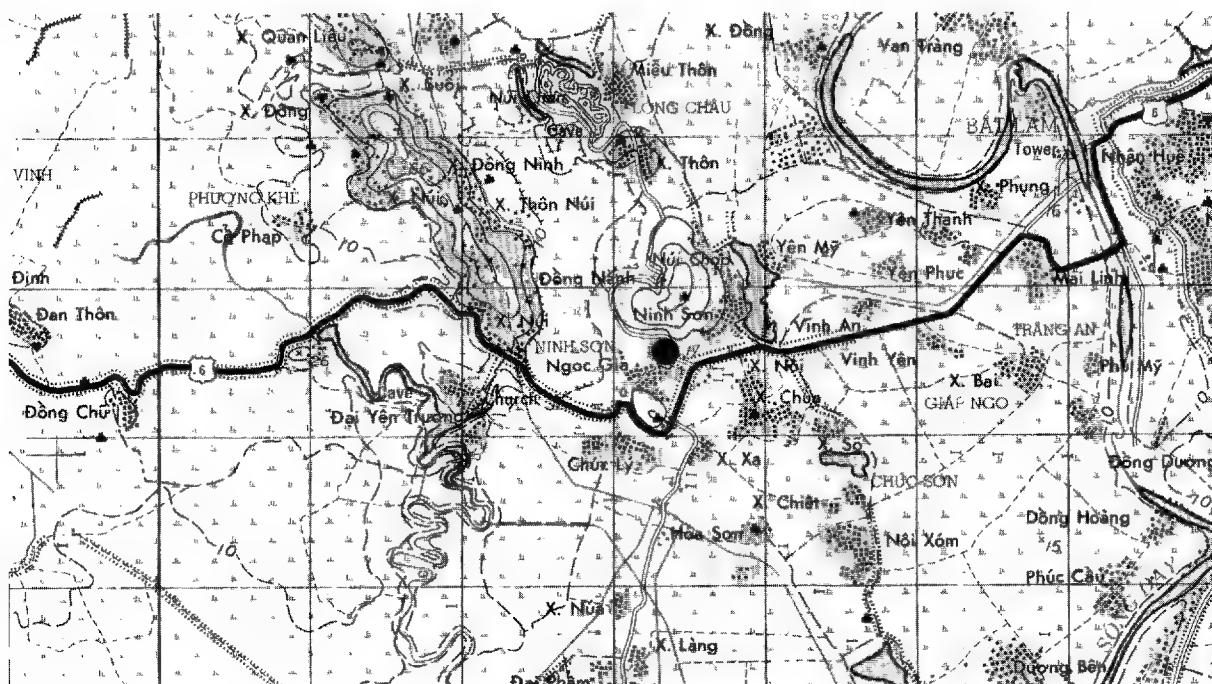
20-55-23N 105-42-17E  
GEOGRAPHIC COORDINATES

LOCATION: 8.6 NM SW OF HANOI/BACH MAI AIRFIELD

DESCRIPTION: THE SUBSTATION CONSISTS OF A CONTROL BUILDING, A TRANSFORMER (ENCLOSED BY A BLAST WALL), AND A SWITCHING YARD. ONE 35-KV AND 1 LOW VOLTAGE POWERLINE ARE TIED INTO THE SUBSTATION.

**PHOTO REFERENCES:**

MAP REFERENCES: AMS SERIES L7014, SHEET 6150-IV, 1ST ED, 1965 (U)  
AMS SERIES JOG(G) 1501, SHEET NF 48-15, 1ST ED, 1965 (U)



~~SECRET~~

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HA NOI TRANSFORMER SUBSTATION NGOC GIA  
WJ733136  
UTM COORDINATES

20-55-23N 105-42-17E  
GEOGRAPHIC COORDINATES



D-61

\_\_\_\_\_

BE NUMBER

WJ906272

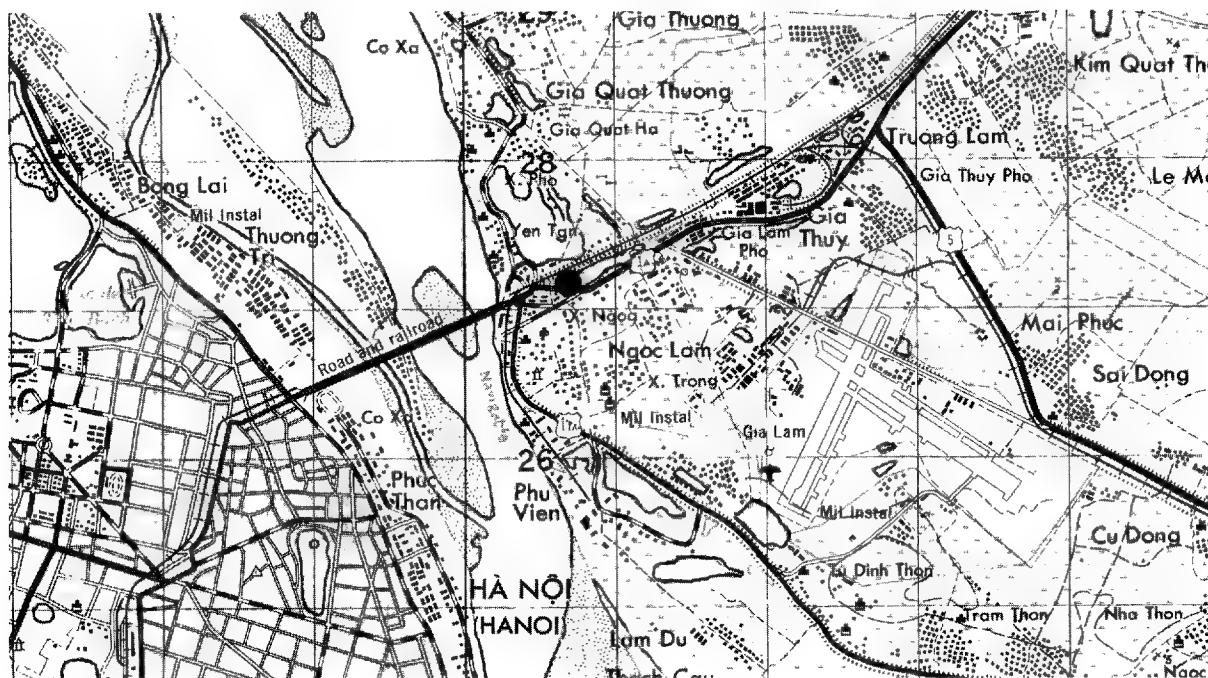
21-02-42N 105-52-23E

LOCATION: 1.1 NM WEST OF HANOI/GIA LAM AIRFIELD

DESCRIPTION: THE SUBSTATION CONSISTS OF A CONTROL/TRANSFORMER/SWITCHING BUILDING. FOUR 35-KV POWERLINES LEAD TO THE HA NOI TRANSFORMER SUBSTATION, HA NOI THERMAL POWERPLANT, AND THE BAC NINH TRANSFORMER SUBSTATION.

**PHOTO REFERENCES:** [REDACTED]

MAP REFERENCES: AMS SERIES L7014, SHEET 6151-II, 1ST ED, 1965 (U)  
AMS SERIES JOG(G) 1501, SHEET NF 48-11, 1ST ED, 1965 (U)



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SECRET

25X1C

R 146 67

HA NOI TRANSFORMER SUBSTATION NGOC LAM  
WJ906272  
UTM COORDINATES

21-02-42N 105-52-23E  
GEOGRAPHIC COORDINATES



D-63

SECRET

25X1C

SECRET

25X1C

146/67

25X1A

BE NUMBER

XJ062378  
UTM COORDINATES

21-08-24N 106-01-20E  
GEOGRAPHIC COORDINATES

NAME: BAC NINH TRANSFORMER SUBSTATION PHUC HAU

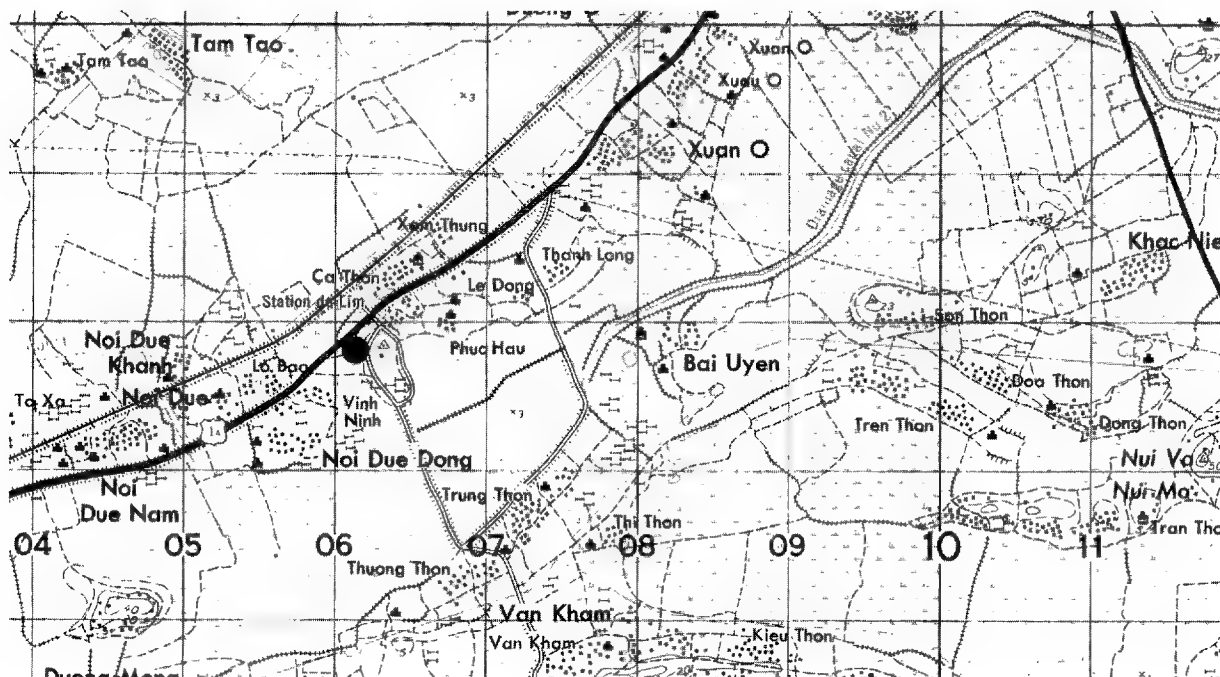
LOCATION: 3.4 NM SSW OF BAC NINH

DESCRIPTION: THE SUBSTATION IS A SECURED INSTALLATION CONSISTING OF A CONTROL BUILDING, A REVETTED TRANSFORMER, AND A SWITCHING YARD. TWO 35-KV AND 2 LOW VOLTAGE POWERLINES ARE TIED INTO THE SUBSTATION.

25X1D

PHOTO REFERENCES:

MAP REFERENCES: AMS SERIES L7014, SHEET 6251-III, 1ST ED, 1965 (U)  
AMS SERIES JOG(G) 1501, SHEET NF 48-11, 1ST ED, 1965 (U)



D-64

SECRET

2560A

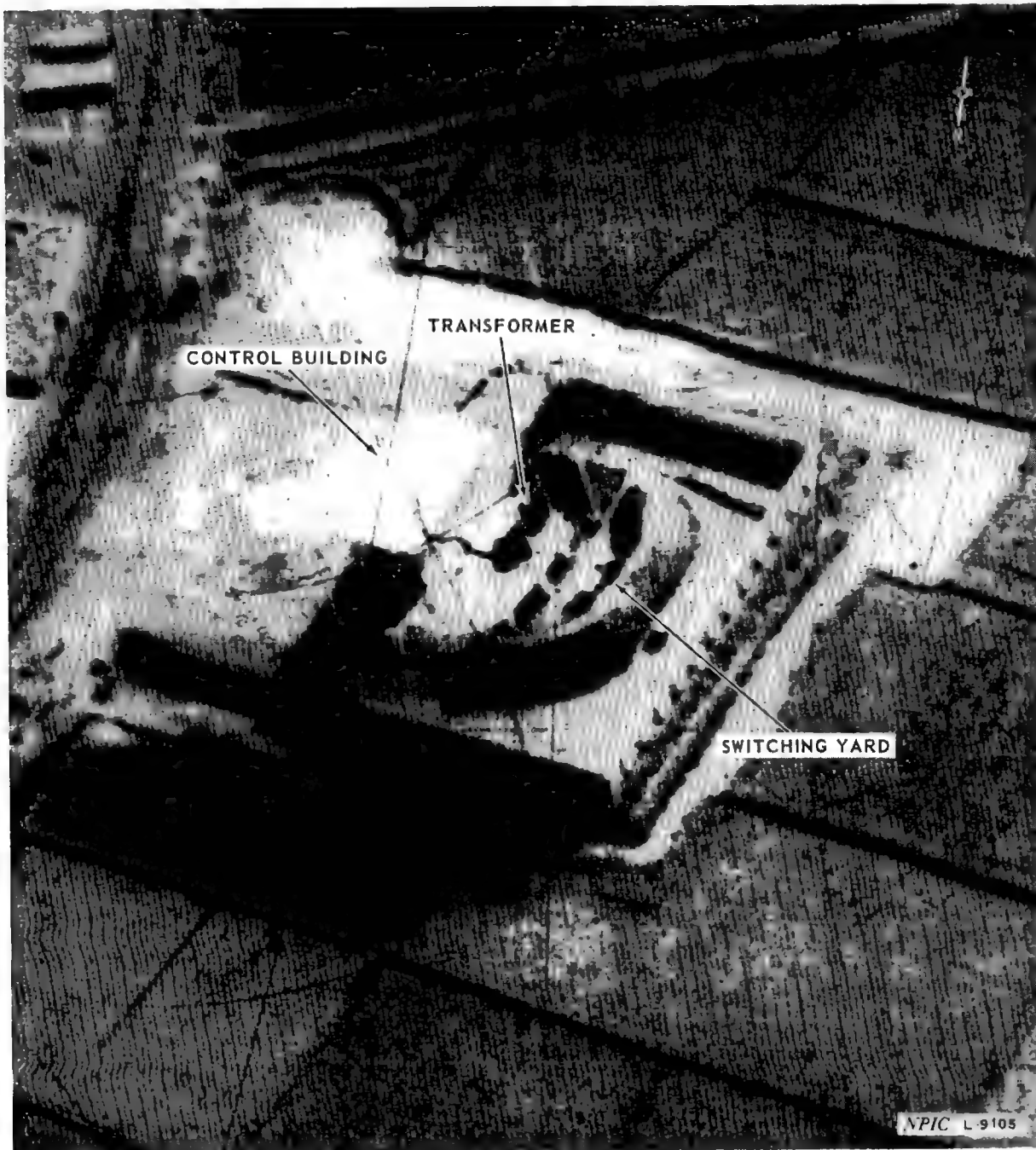


SECRET

25X1C

R-146/67

BAC NINH TRANSFORMER SUBSTATION PHUC HAU  
XJ062378 21-08-24N 106-01-20E  
UTM COORDINATES GEOGRAPHIC COORDINATES



D-65

SECRET

25X1C



SECRET

25X1C

R-146/67

BE NUMBER	UTM COORDINATES	GEOGRAPHIC COORDINATES
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NAME: PHU THO SUSPECT TRANSFORMER SUBSTATION

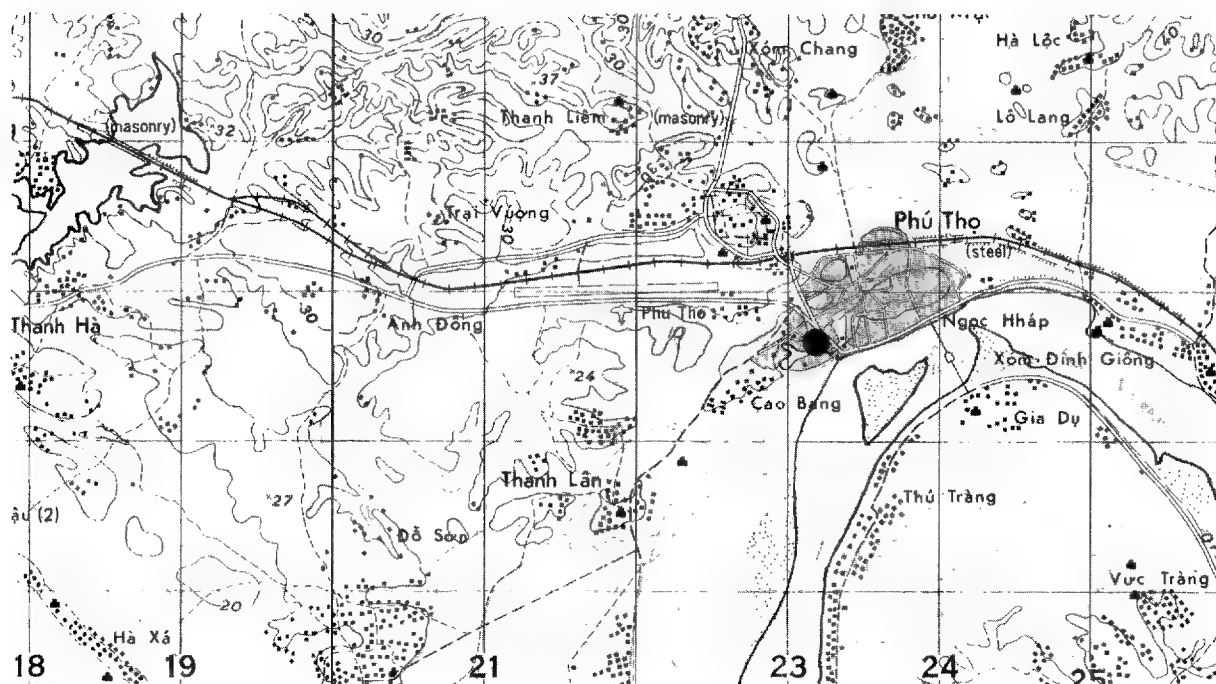
LOCATION: 0.8 NM EAST OF PHU THO AIRFIELD

DESCRIPTION: THE SUSPECT SUBSTATION CONSISTS OF A REVETTED SUSPECT CONTROL/ TRANSFORMER BUILDING AND A REVETTED POSSIBLE SUPPORT BUILDING. ONE PROBABLE 35-KV AND 1 LOW VOLTAGE POWERLINES ARE TIED INTO THE SUBSTATION.

25X1D

PHOTO REFERENCES:

MAP REFERENCES: AMS SERIES L7014, SHEET 6051-IV, 1ST ED, 1965 (U)  
AMS SERIES JOG(G) 1501, SHEET NF 48-11, 1ST ED, 1965 (U)



D-66

SECRET

25X1C

WJ232656  
UTM COORDINATES

PHU THO SUSPECT TRANSFORMER SUBSTATION  
21-23-38N 105-13-24E  
GEOGRAPHIC COORDINATES



D-67

SECRET

R-146/67

NO FOREIGN DISSEM [REDACTED]

25X1A

[REDACTED]  
BE NUMBERWJ878157  
UTM COORDINATES20-56-35N 105-50-43E  
GEOGRAPHIC COORDINATES

NAME: VAN DIEN TRANSFORMER SUBSTATION QUYNH DO

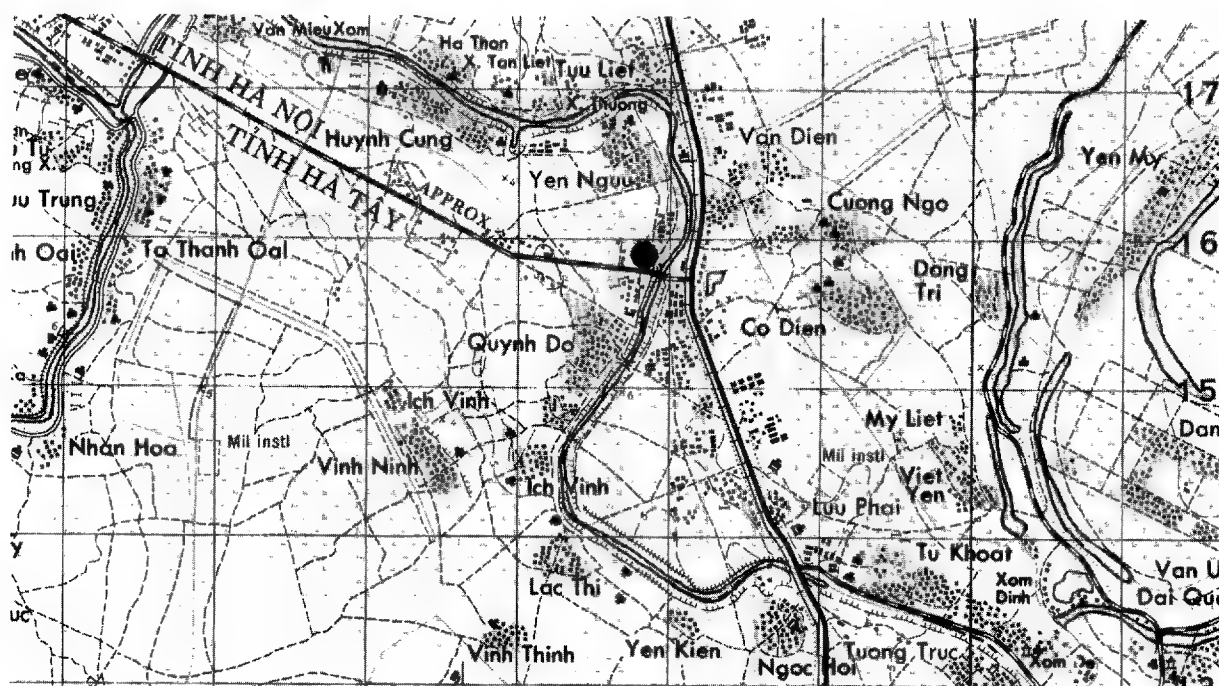
LOCATION: 2.9 NM SOUTH OF HANOI/BAC MAI AIRFIELD

DESCRIPTION: THE PARTIALLY SECURED SUBSTATION CONSISTS OF A CONTROL/SWITCHING BUILDING AND A TRANSFORMER BUILDING. ONE 35-KV AND 4 LOW VOLTAGE POWERLINES ARE TIED INTO THE SUBSTATION.

25X1D

PHOTO REFERENCES: [REDACTED]

MAP REFERENCES: AMS SERIES L7014, SHEET 6150-I, 1ST ED, 1965 (U)  
AMS SERIES JOG(G) 1501, SHEET NF 48-15, 1ST ED, 1965 (U)



D-68

SECRET

NO FOREIGN DISSEM [REDACTED]

SECRET

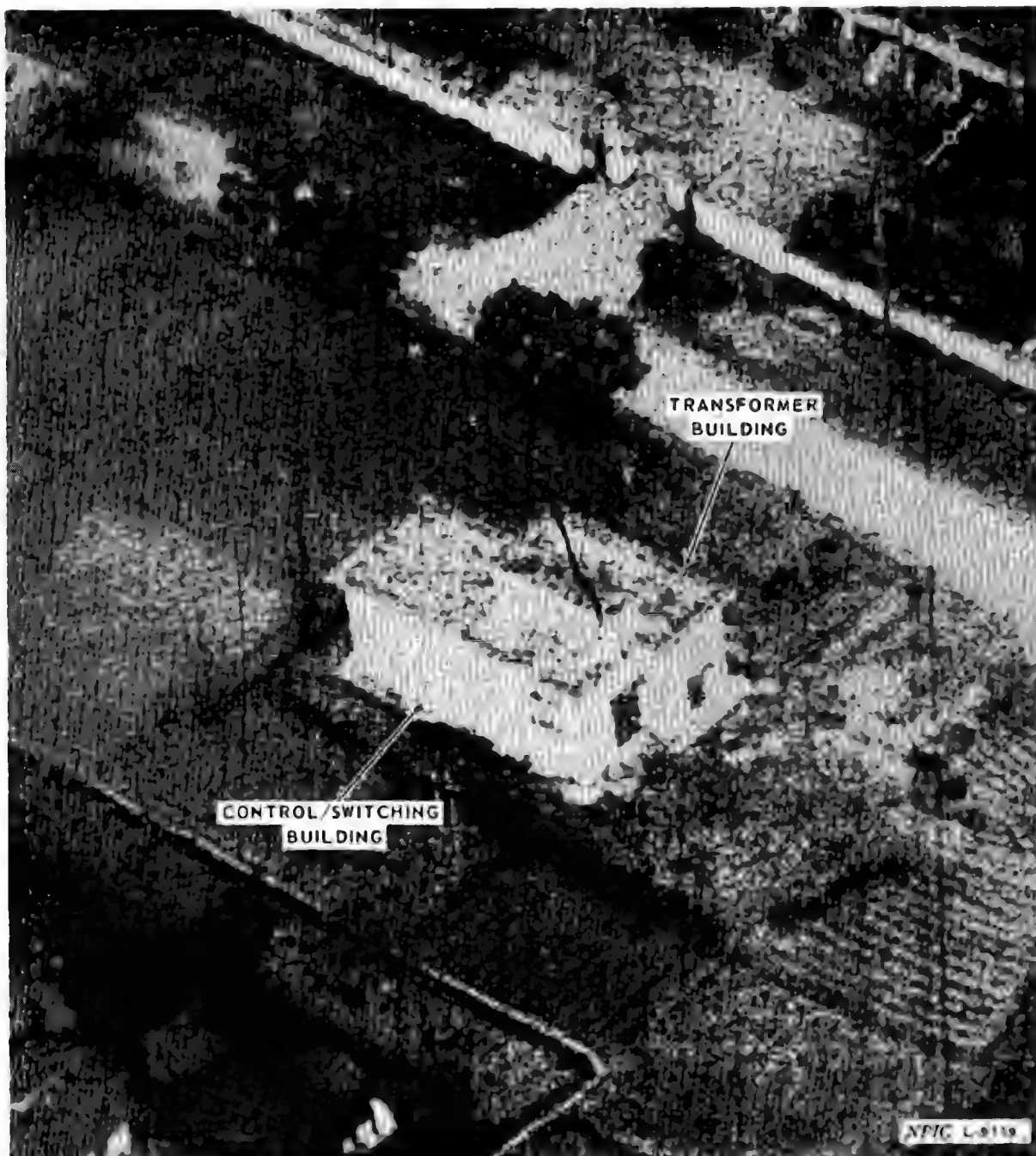
25X1C

R-146/67

WJ878157  
UTM COORDINATES

VAN DIEN TRANSFORMER SUBSTATION QUYNH DO

20-56-35N 105-50-43E  
GEOGRAPHIC COORDINATES



D-69

SECRET

25X1C

25X1A

[REDACTED]  
BE NUMBER

XH408613  
UTM COORDINATES

20-26-48N 106-21-03E  
GEOGRAPHIC COORDINATES

NAME: THAI BINH TRANSFORMER SUBSTATION

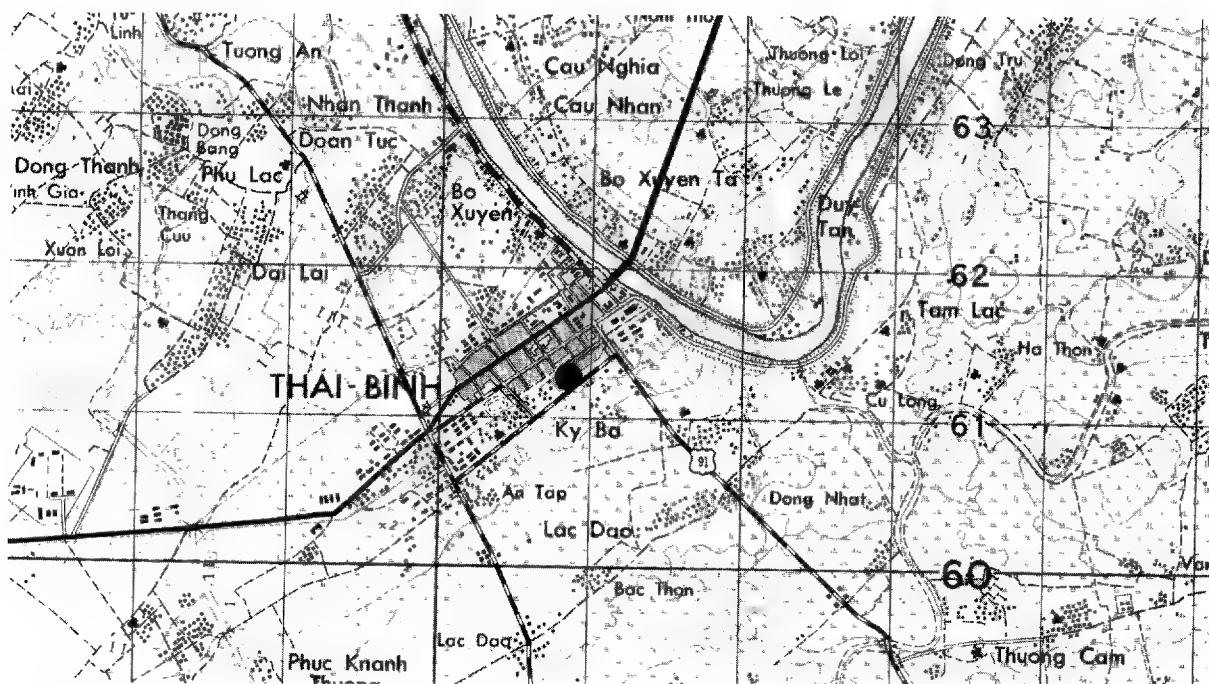
LOCATION: ON THE SE EDGE OF THAI BINH AND 8.6 NM EAST OF NAM DINH

DESCRIPTION: THE SUBSTATION IS A SECURED INSTALLATION CONSISTING OF A CONTROL/TRANSFORMER/SWITCHING BUILDING AND POSSIBLY 3 ASSOCIATED BUILDINGS. TWO 35-KV AND 2 LOW VOLTAGE POWERLINES ARE TIED INTO THE INSTALLATION.

25X1D

PHOTO REFERENCES: [REDACTED]

MAP REFERENCES: AMS SERIES L7014, SHEET 6249-I, 1ST ED, 1965 (U)  
AMS SERIES JOG(G) 1501, SHEET NF 48-15, 1ST ED, 1965 (U)



D-70



SECRET

25X16

R-146/67

XH408613  
UTM COORDINATES

THAI BINH TRANSFORMER SUBSTATION

20-26-48N 106-21-03E  
GEOGRAPHIC COORDINATES



D-71

SECRET

25X16



BE NUMBER	UTM COORDINATES	GEOGRAPHIC COORDINATES
	WJ845904	21-37-00N 105-49-01E

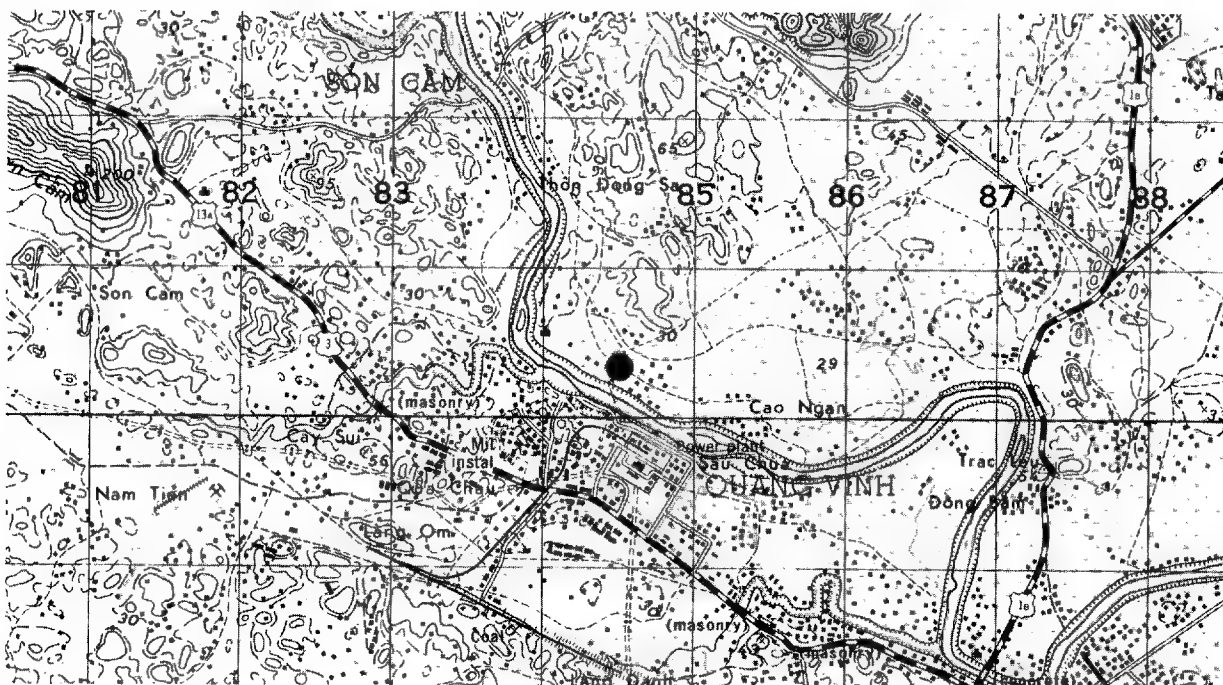
NAME: THAI NGUYEN SUSPECT SWITCHING SUBSTATION

LOCATION: 2.1 NM NW OF THAI NGUYEN

DESCRIPTION: THE SUBSTATION IS A SECURED INSTALLATION CONSISTING OF 2 POWERLINE SUPPORTING STRUCTURES, 1 OF WHICH HAS 6 SUSPECT MANUAL SWITCHING GEARS. THE INSTALLATION SWITCHES 35-KV POWER FROM THE THAI NGUYEN THERMAL POWER-PLANT. THREE 35-KV POWERLINES ARE TIED INTO THE SUBSTATION.

25X1D PHOTO REFERENCES:

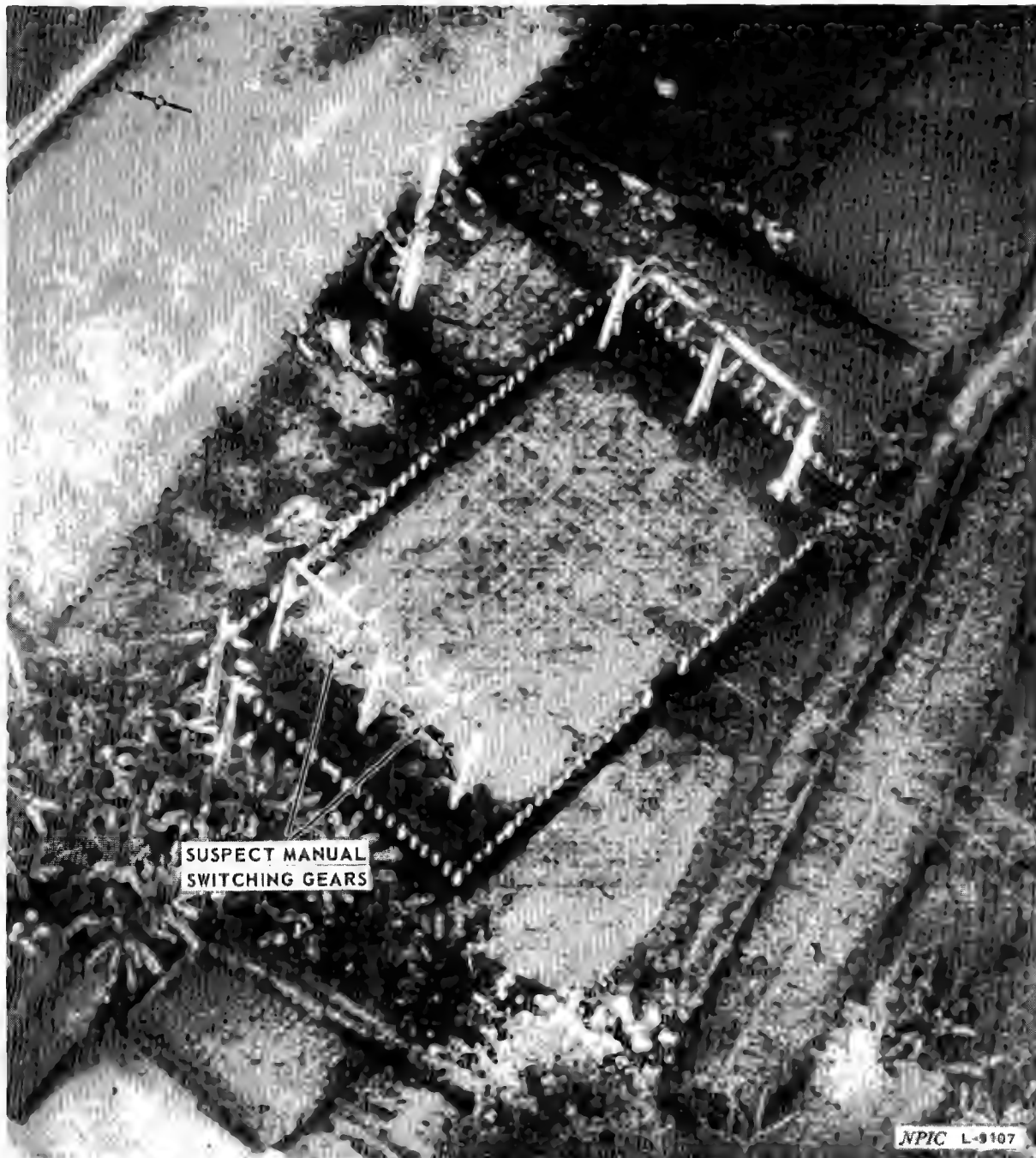
MAP REFERENCES: AMS SERIES L7014, SHEET 6152-II, 1ST ED, 1965 (U)  
AMS SERIES JOG(G) 1501, SHEET NF 48-11, 1ST ED, 1965 (U)



WJ845904  
UTM COORDINATES

THAI NGUYEN SUSPECT SWITCHING SUBSTATION

21-37-00N 105-49-01E  
GEOGRAPHIC COORDINATES



D-73

NO FOREIGN DISSEM

25X1A

BE NUMBER

XJ746954  
UTM COORDINATES

20-45-08N 106-40-40E  
GEOGRAPHIC COORDINATES

NAME: THO LINH TRANSFORMER SUBSTATION

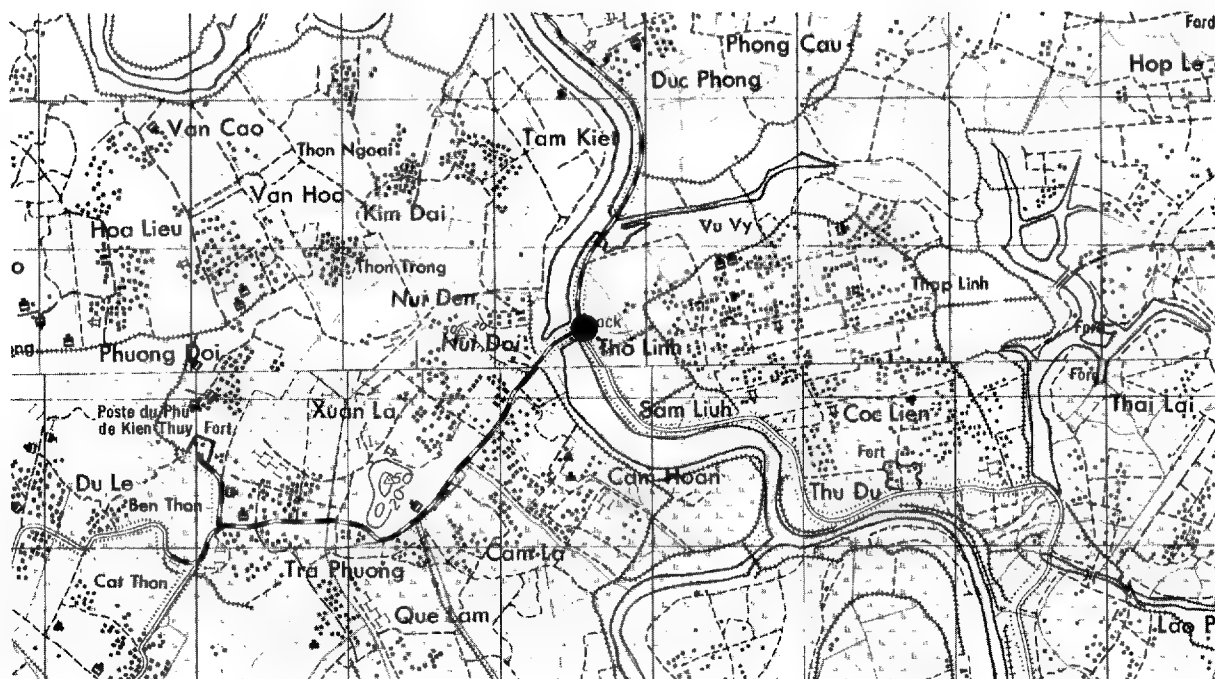
LOCATION: 6.7 NM SOUTH OF HAI PHONG

DESCRIPTION: THE SUBSTATION IS A SECURED INSTALLATION CONSISTING OF A CONTROL/TRANSFORMER BUILDING AND A SWITCHING YARD. TWO 35-KV AND 2 LOW VOLTAGE POWERLINES ARE TIED INTO THE SUBSTATION.

25X1D

PHOTO REFERENCES:

MAP REFERENCES: AMS SERIES L7014, SHEET 6350-IV, 1ST ED, 1965 (U)  
AMS SERIES JOG(G) 1501, SHEET NF 48-16, 1ST ED, 1965 (U)



D-74

NO FOREIGN DISSEM

SECRET

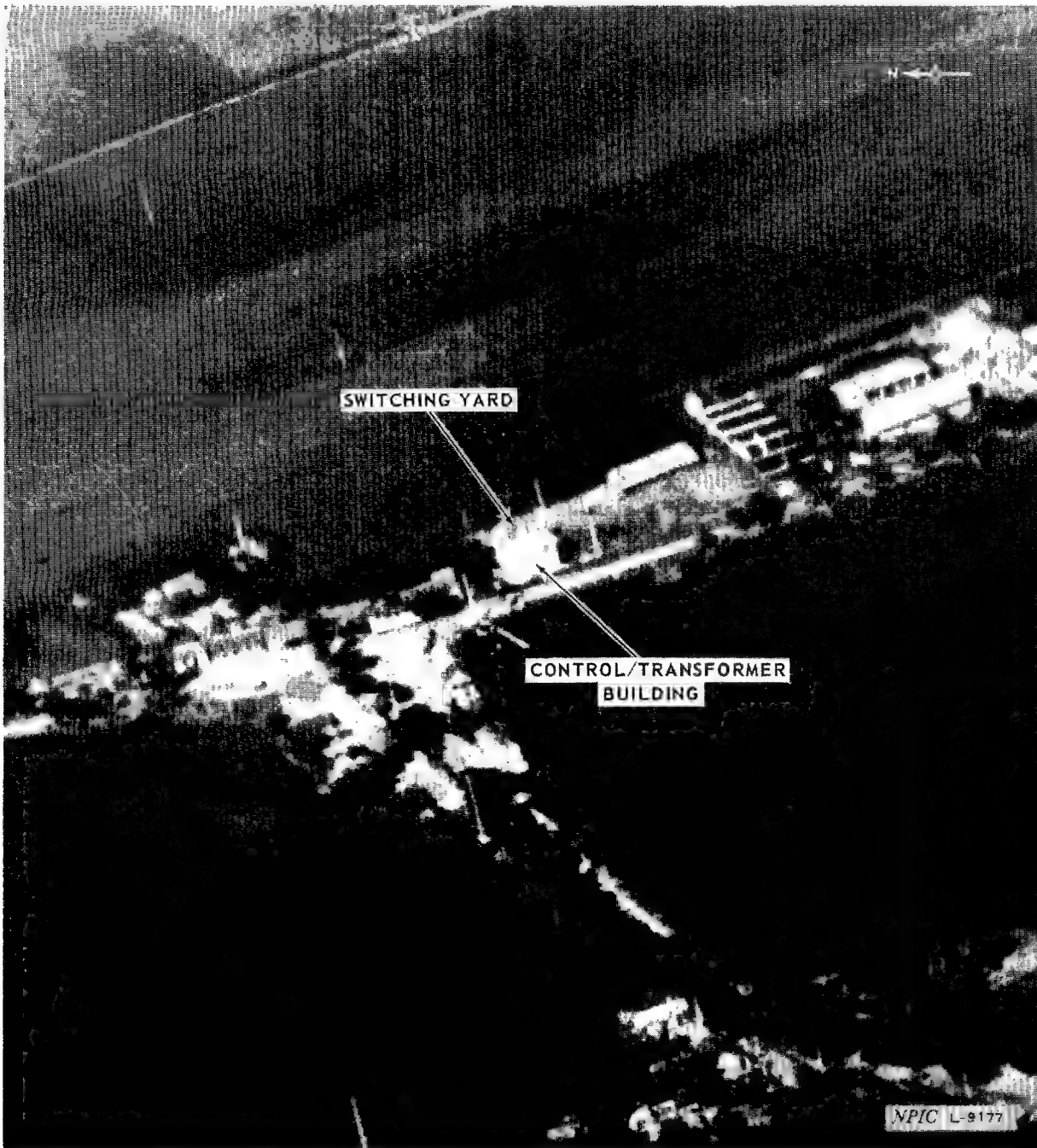
25X1C

R-146/67

THO LINH TRANSFORMER SUBSTATION

XJ746954  
UTM COORDINATES

20-45-08N 106-40-40E  
GEOGRAPHIC COORDINATES



D-75

SECRET

25X1C

SECRET

25X1C

25X1A

BE NUMBER

XJ836186  
UTM COORDINATES

20-57-48N 106-46-00E  
GEOGRAPHIC COORDINATES

NAME: HAI PHONG TRANSFORMER SUBSTATION TRANG KINH

LOCATION: AT TRANG KINH 2.6 NM NW OF QUANG YEN

DESCRIPTION: THE SUBSTATION CONSISTS OF A CONTROL BUILDING, 2 TRANSFORMERS, AND A SWITCHING YARD. TWO 35-KV AND 2 LOW VOLTAGE POWERLINES ARE TIED INTO THE SUBSTATION.

25X1D PHOTO REFERENCES:

MAP REFERENCES: AMS SERIES L7014, SHEET 6350-I, 1ST ED, 1965 (U)  
AMS SERIES JOG(G) 1501, SHEET NF 48-16, 1ST ED, 1965 (U)



D-76

SECRET

25X1C



SECRET

R-146/67

XJ836186  
UTM COORDINATES

HAI PHONG TRANSFORMER SUBSTATION TRANG KINH

20-57-48N 106-46-00E  
GEOGRAPHIC COORDINATES



D-77

SECRET

25X16



25X1A

BE NUMBER

XH127486  
UTM COORDINATES

20-20-05N 106-04-41E  
GEOGRAPHIC COORDINATES

NAME: NAM DINH TRANSFORMER SUBSTATION VAN COI

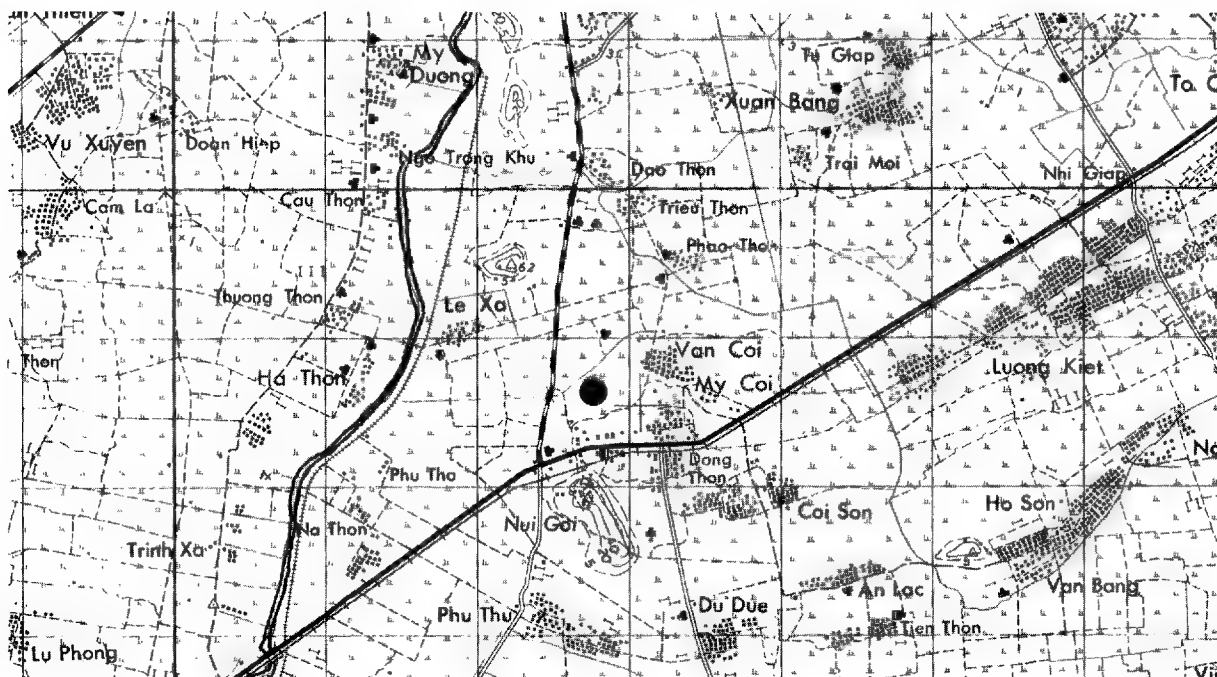
LOCATION: 7.3 NM SSW OF NAM DINH

DESCRIPTION: THE SUBSTATION IS A SECURED INSTALLATION CONSISTING OF A CONTROL BUILDING, 2 PROBABLE TRANSFORMERS, AND A SWITCHING YARD. TWO 35-KV AND 2 LOW VOLTAGE POWERLINES ARE TIED INTO THE INSTALLATION.

25X1D

PHOTO REFERENCES:

MAP REFERENCES: AMS SERIES L7014, SHEET 6249-IV, 1ST ED, 1965 (U)  
AMS SERIES JOG(G) 1501, SHEET NF 48-15, 1ST ED, 1965 (U)



D-78

SECRET

25X1C

R-146/67

NAM DINH TRANSFORMER SUBSTATION VAN COI

XH127486  
UTM COORDINATES

20-20-05N. 106-04-41E  
GEOGRAPHIC COORDINATES



D-79

SECRET

25X1C

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R-146/67

BE NUMBER

WJ743149

20-56-05N 105-42-55E

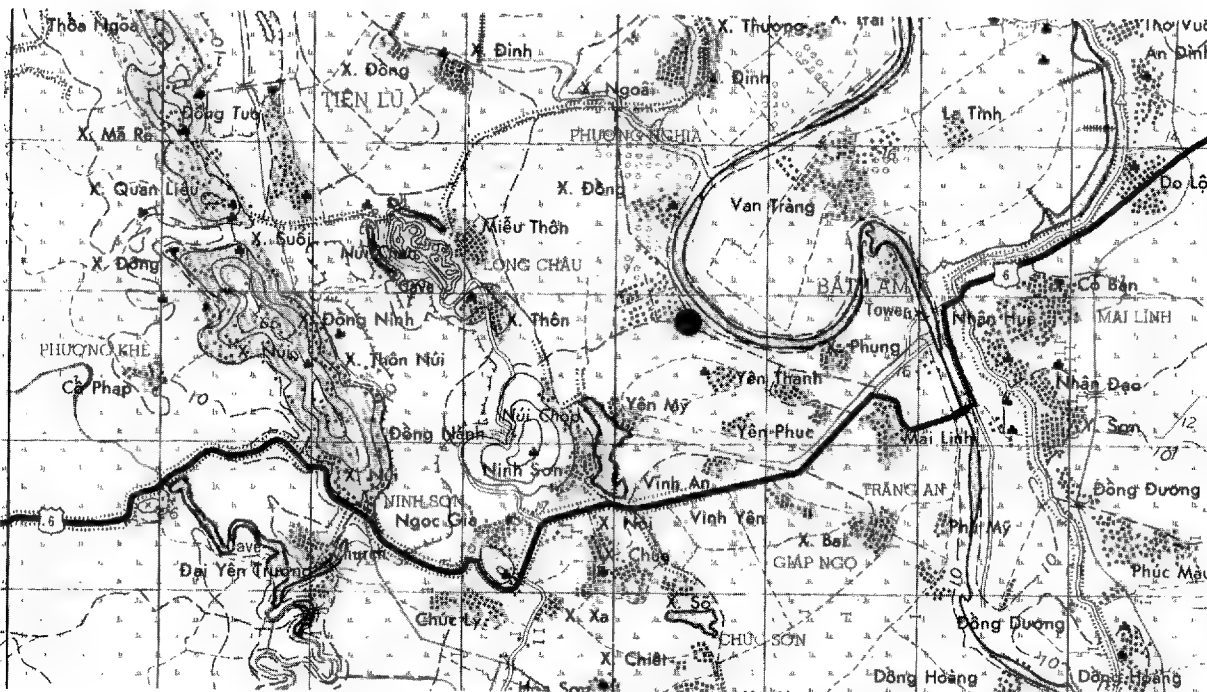
NAME: YEN THANH TRANSFORMER SUBSTATION

LOCATION: 7.7 NM SW OF HANOI/BACH MAI AIRFIELD

DESCRIPTION: THE SUBSTATION CONSISTS OF A CONTROL BUILDING, A SWITCHING YARD, AND 2 TRANSFORMERS. ONE 35-KV AND 2 LOW VOLTAGE POWERLINES ARE TIED INTO THE SUBSTATION.

**PHOTO REFERENCES:**

**MAP REFERENCES:** AMS SERIES L7014, SHEET 6150-IV, 1ST ED, 1965 (U)  
AMS SERIES JOG(G) 1501, SHEET NF 48-15, 1ST ED, 1965 (U)



Approved For Release 2001/11/19 : CIA-RDP78B04568A006000010021-9

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SECRET

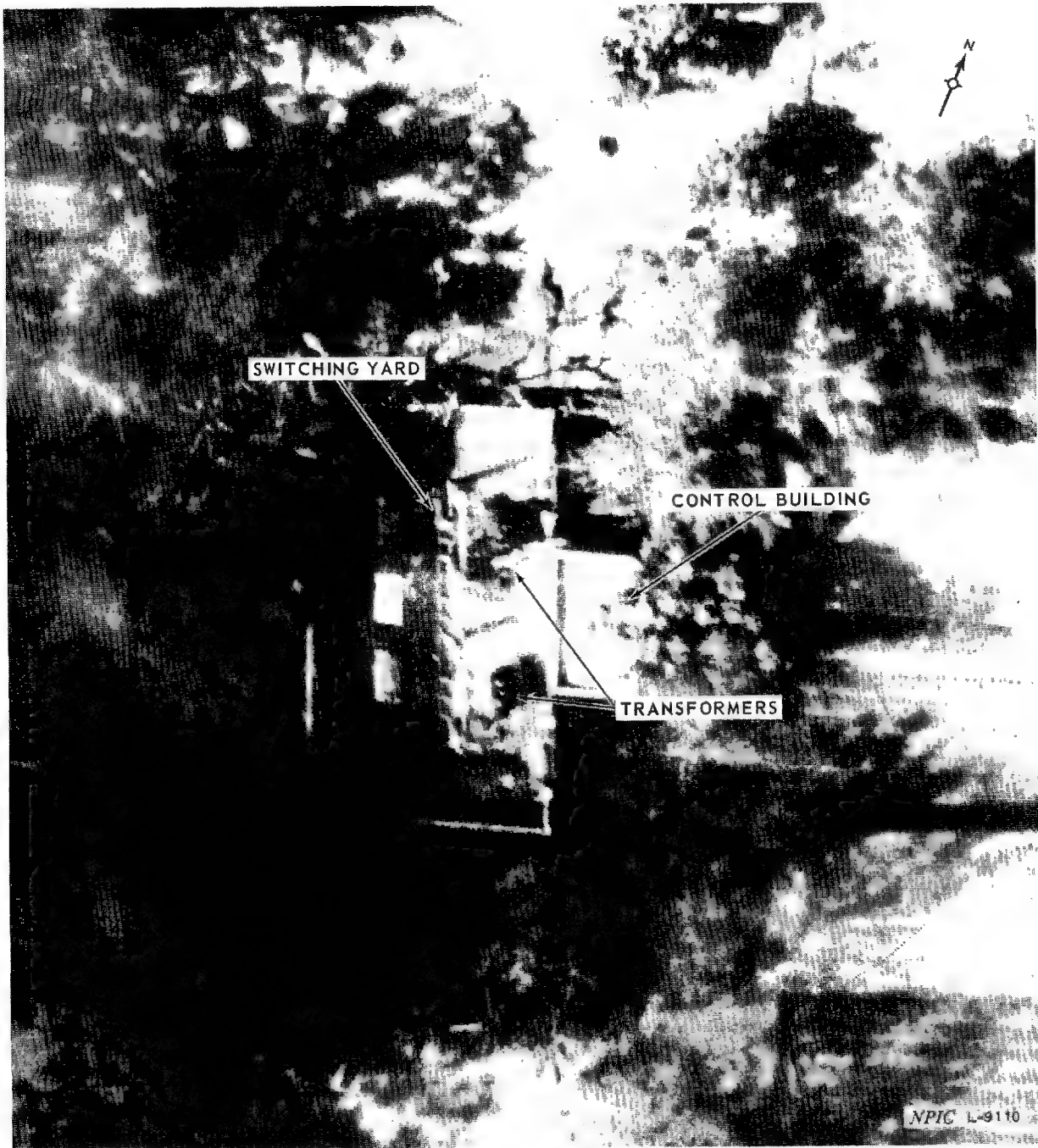
25X1C

R-146/67

YEN THANH TRANSFORMER SUBSTATION

WJ743149  
UTM COORDINATES

20-56-05N 105-42-55E  
GEOGRAPHIC COORDINATES



D-81

SECRET

25X1C

SECRET

25X1C

R-146/67

25X1A

BE NUMBER

XH464926  
UTM COORDINATES

20-43-43N 106-24-25E  
GEOGRAPHIC COORDINATES

NAME: NINH GIANG TRANSFORMER SUBSTATION EAST

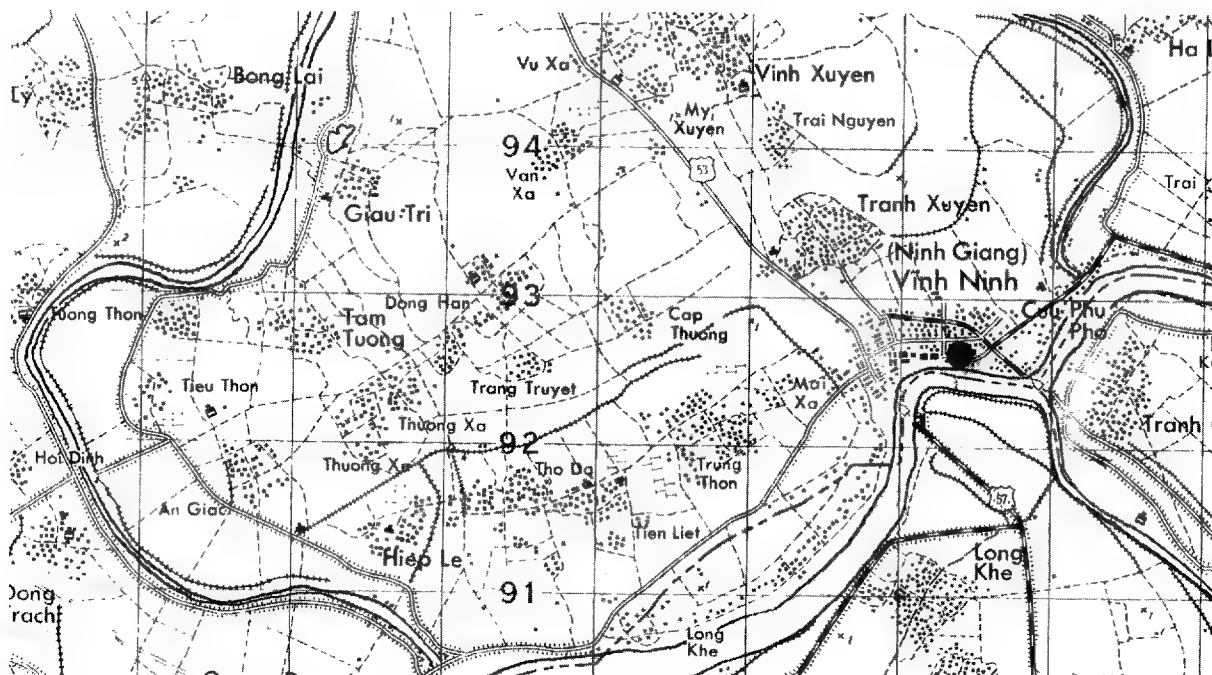
LOCATION: 0.2 NM SE OF NINH GIANG

DESCRIPTION: THE SUBSTATION IS A SECURED INSTALLATION CONSISTING OF A TRANSFORMER YARD AND A SWITCHING YARD. THE TRANSFORMERS AND INSULATORS HAVE BEEN REMOVED. THE INSTALLATION IS INOPERATIVE.

25X1D

PHOTO REFERENCES:

MAP REFERENCES: AMS SERIES L7014, SHEET 6250-II, 1ST ED, 1965 (U)  
AMS SERIES JOG(G) 1501, SHEET NF 48-15, 1ST ED, 1965 (U)



D-82

SECRET



SECRET

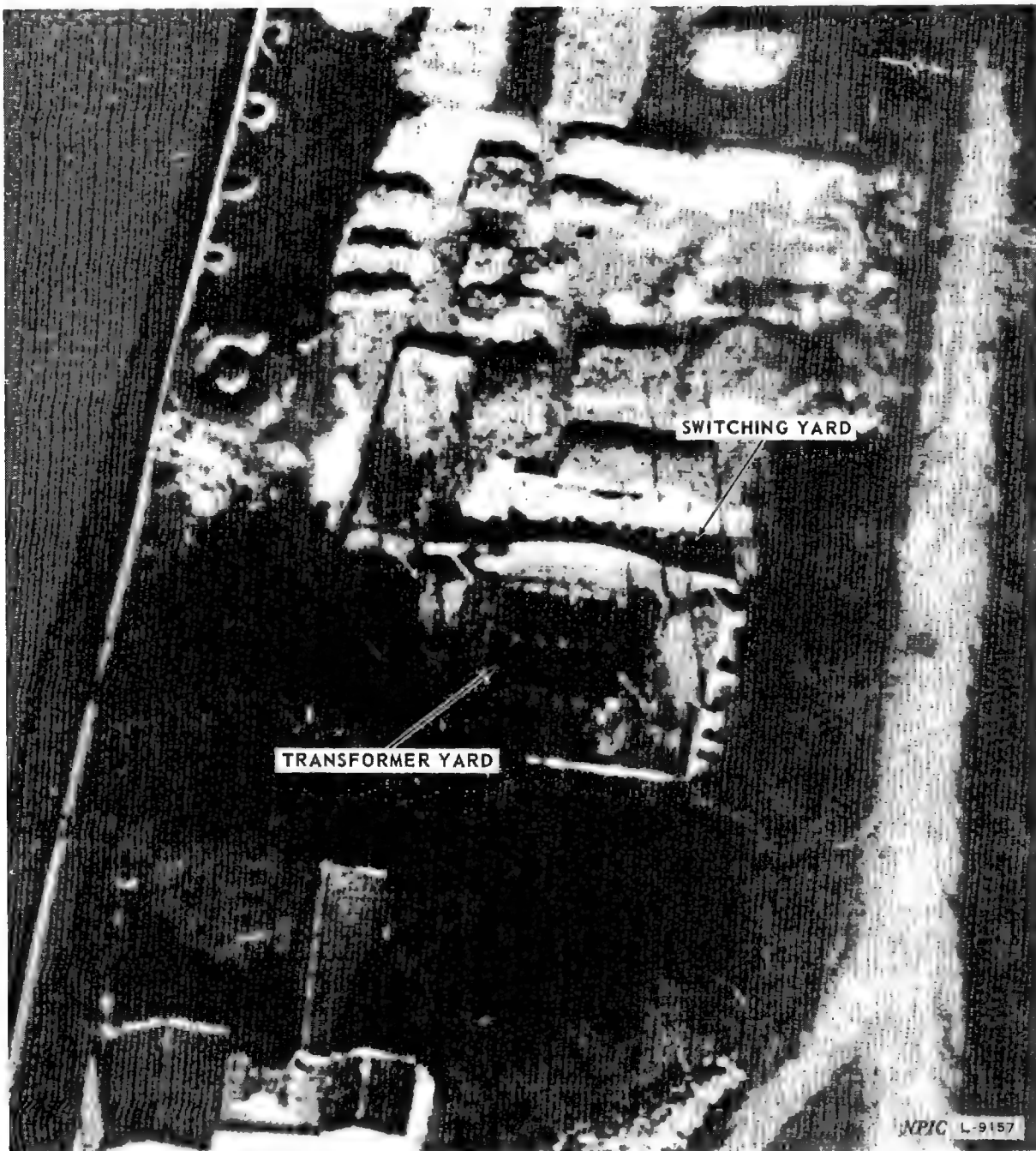
25X1C

R-146/67

XH464926  
UTM COORDINATES

NINH GIANG TRANSFORMER SUBSTATION EAST

20-43-43N 106-24-25E  
GEOGRAPHIC COORDINATES



D-83

SECRET



SECRET

25X1C

R-146/67

25X1A

BE NUMBER

XH459926  
UTM COORDINATES

20-43-46N 106-24-04E  
GEOGRAPHIC COORDINATES

NAME: NINH GIANG TRANSFORMER SUBSTATION, WEST

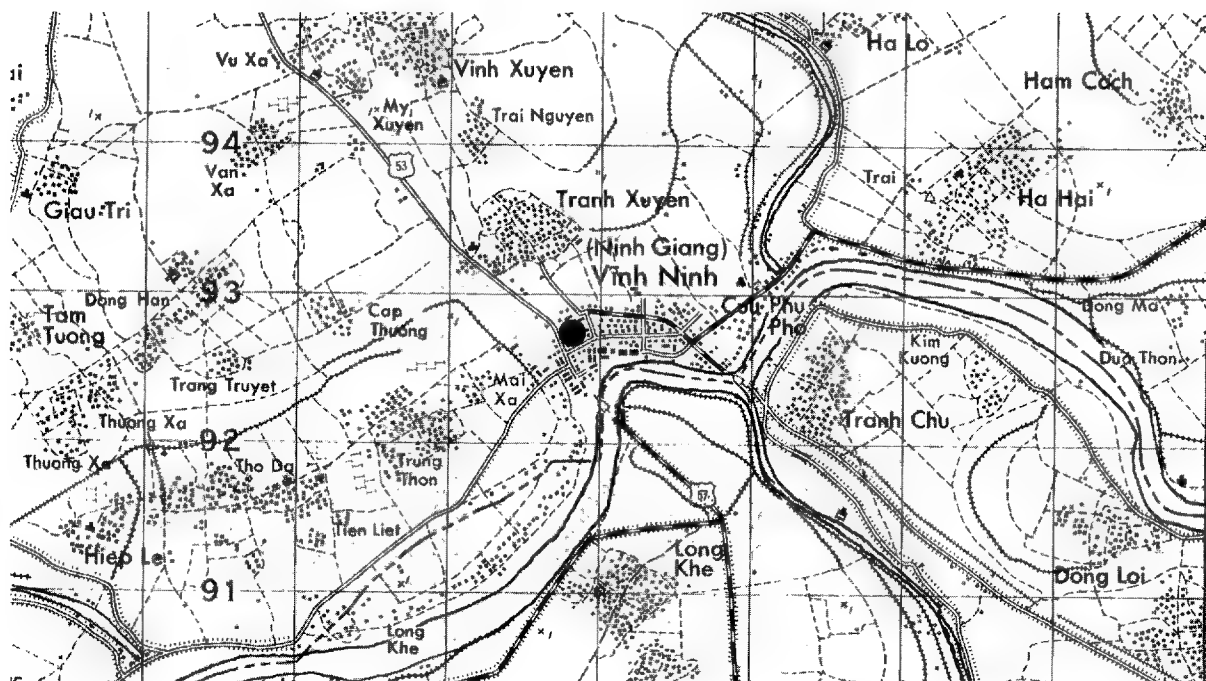
LOCATION: 0.2 NM WEST OF NINH GIANG

DESCRIPTION: THE SUBSTATION IS A REVETTED INSTALLATION CONSISTING OF A TRANSFORMER ANNEX AND A CONTROL/SWITCHING BUILDING. ONE 35-KV AND 2 LOW VOLTAGE POWERLINES ARE TIED INTO THE SUBSTATION.

25X1D

PHOTO REFERENCES:

MAP REFERENCES: AMS SERIES L7014, SHEET 6250-II, 1ST ED, 1965 (U)  
AMS SERIES JOG(G) 1501, SHEET NF 48-15, 1ST ED, 1965 (U)



D-84

SECRET

SECRET

25X1C

R-146/67

NINH GIANG TRANSFORMER SUBSTATION, WEST

XH459926  
UTM COORDINATES

20-43-46N 106-24-04E  
GEOGRAPHIC COORDINATES



D-85

SECRET

SECRET

25X1C

R-146/67

25X1A

BE NUMBER

XH472822  
UTM COORDINATES

20-38-08N 106-24-43E  
GEOGRAPHIC COORDINATES

NAME: NINH GIANG TRANSFORMER SUBSTATION VU HA

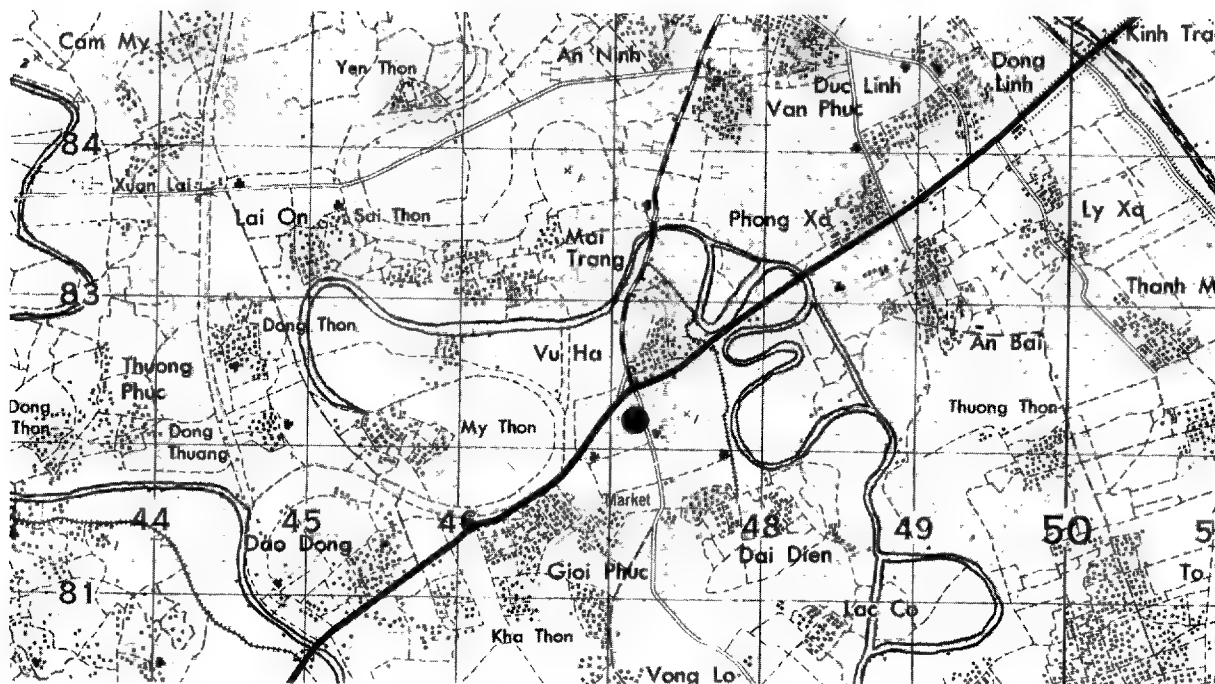
LOCATION: 5.6 NM SOUTH OF VINH NINH

DESCRIPTION: THE SUBSTATION IS A SECURED INSTALLATION CONSISTING OF A CONTROL BUILDING, A POSSIBLE TRANSFORMER, AND A SWITCHING YARD. THREE 35-KV AND 2 LOW VOLTAGE POWERLINES ARE TIED INTO THE SUBSTATION.

25X1D

PHOTO REFERENCES:

MAP REFERENCES: AMS SERIES L7014, SHEET 6250-II 1ST ED, 1965 (U)  
AMS SERIES JOG(G) 1501, SHEET NF 48-15, 1ST ED, 1965 (U)



D-86

SECRET

25X1C

SECRET

25X1C

R-146/67

NINH GIANG TRANSFORMER SUBSTATION VU HA

XH472822  
UTM COORDINATES

20-38-08N 106-24-43E  
GEOGRAPHIC COORDINATES



D-87

SECRET

25X1A

BE NUMBER

WJ821196  
UTM COORDINATES

20-58-37N 105-47-23E  
GEOGRAPHIC COORDINATES

NAME: HA DONG TRANSFORMER SUBSTATION XOM DONG

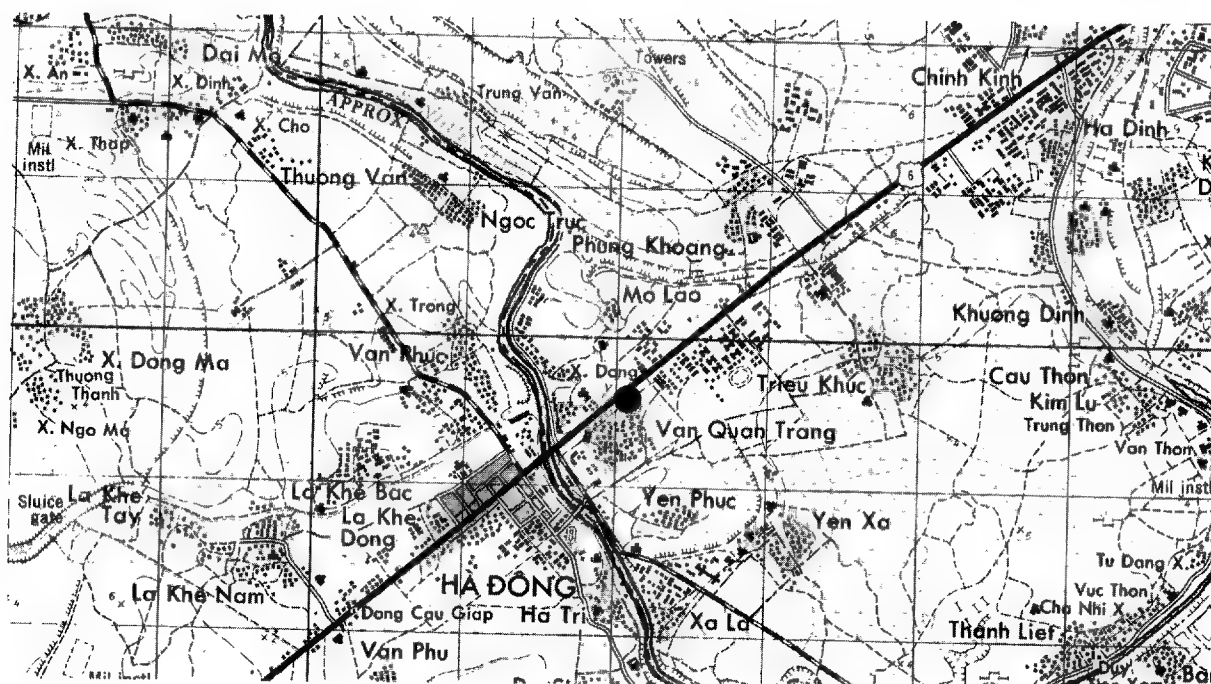
LOCATION: 2.8 NM SW OF HANOI/BAC MAI AIRFIELD

DESCRIPTION: THE SECURED SUBSTATION CONTAINS A CONTROL/SWITCHING/TRANS-  
FORMER BUILDING. ONE 35-KV AND 2 LOW VOLTAGE POWERLINES ARE TIED INTO  
THE SUBSTATION.

25X1D

PHOTO REFERENCES:

MAP REFERENCES: AMS SERIES L7014, SHEET 6150-I, 1ST ED, 1965 (U)  
AMS SERIES JOG(G) 1501, SHEET NF 48-15, 1ST ED, 1965 (U)



D-88



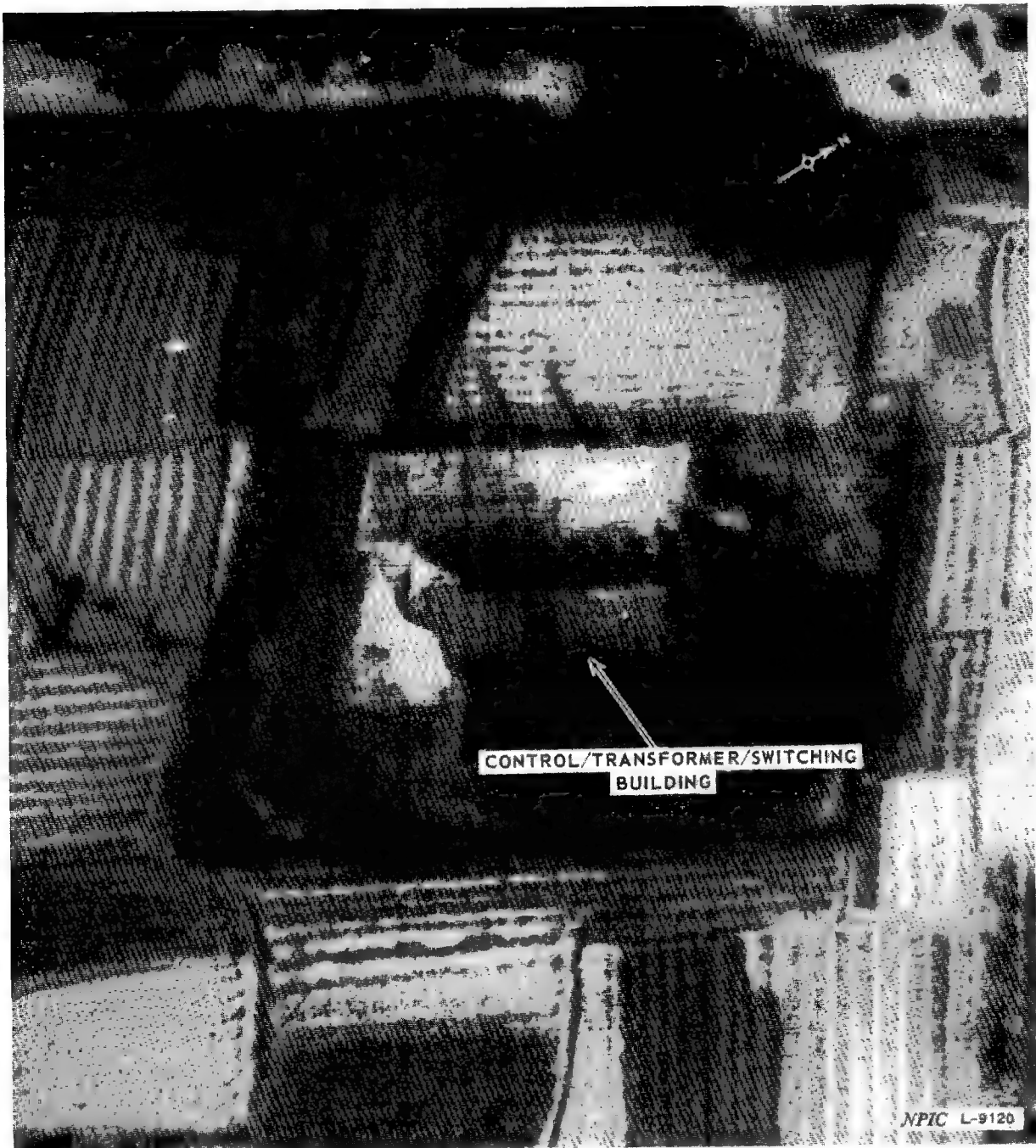
SECRET

25X1C

R-146/67

WJ821196  
UTM COORDINATES

HA DONG TRANSFORMER SUBSTATION XOM DONG  
20-58-37N 105-47-23E  
GEOGRAPHIC COORDINATES



D-89

SECRET

25X1C



SECRET

25X1C

R-146/67

25X1A

BE NUMBER

WF519703  
UTM COORDINATES

18-43-31N 105-29-31E  
GEOGRAPHIC COORDINATES

NAME: XOM TRUNG HOA TRANSFORMER SUBSTATION

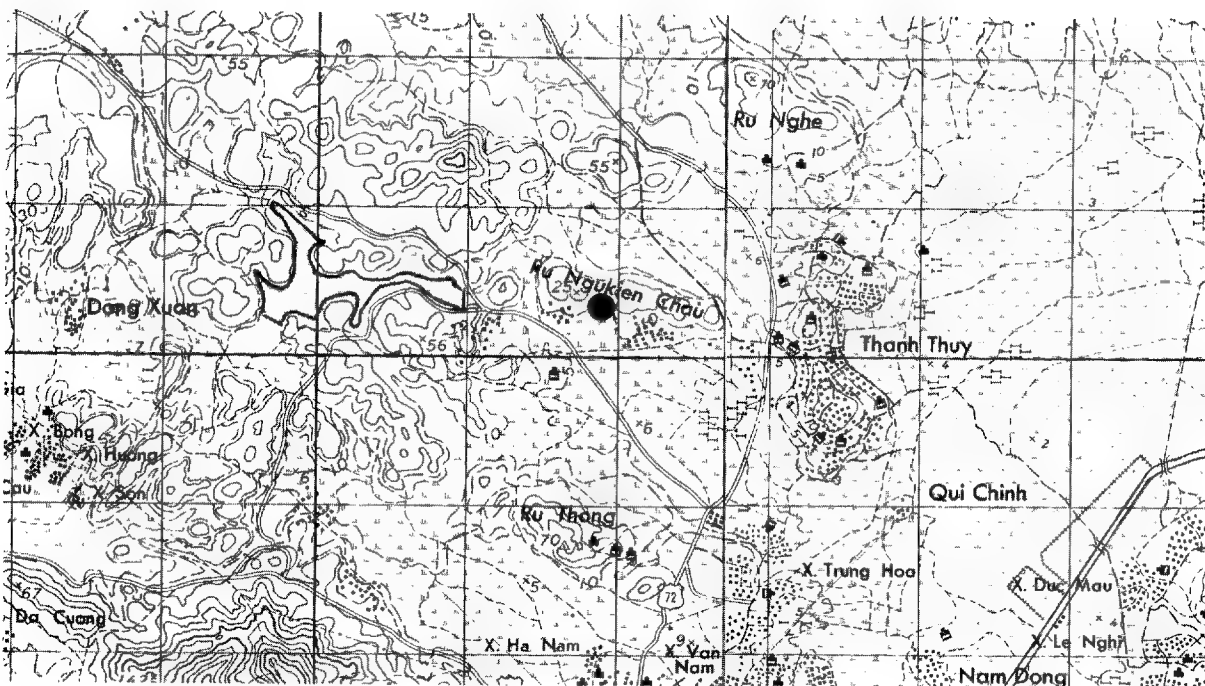
LOCATION: 11.2 NM WNW OF VINH WITHIN THE XOM TRUNG HOA COMMUNICATIONS FACILITY

DESCRIPTION: THE TRANSFORMER SUBSTATION CONSISTS OF A CONTROL/TRANSFORMER BUILDING AND A SWITCHING YARD. ONE 35-KV AND 2 LOW VOLTAGE POWERLINES ARE TIED INTO THE SUBSTATION. A MINOR SUBSTATION IS ADJACENT TO THE SUBSTATION, PROBABLY TO TRANSFORM ELECTRIC POWER FOR USE AT THE NEARBY VILLAGE AND MILITARY AREA.

25X1D

PHOTO REFERENCES:

MAP REFERENCES: AMS SERIES L7014, SHEET 6046-II, 1ST ED, 1965 (U)  
AMS SERIES JOG(G) 1501, SHEET NE 48-7, 1ST ED, 1965 (U)



D-90

SECRET

25X1C

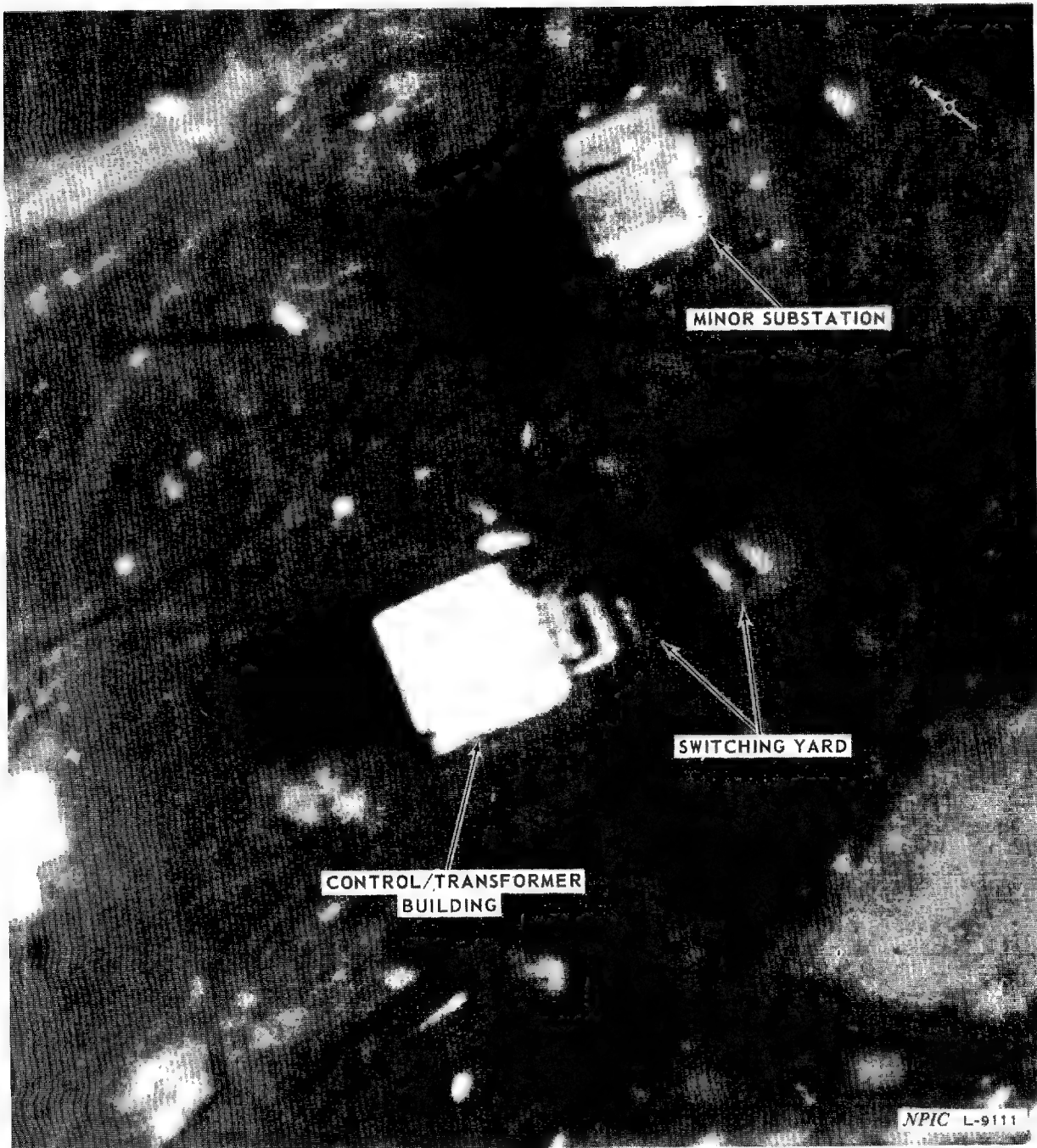
SECRET

25X1C

WF519703  
UTM COORDINATES

XOM TRUNG HOA TRANSFORMER SUBSTATION

18-43-31N 105-29-31E  
GEOGRAPHIC COORDINATES



D-91

SECRET

25X1C

25X1A

BE NUMBER

WJ906213  
UTM COORDINATES

20-59-34N 105-52-20E  
GEOGRAPHIC COORDINATES

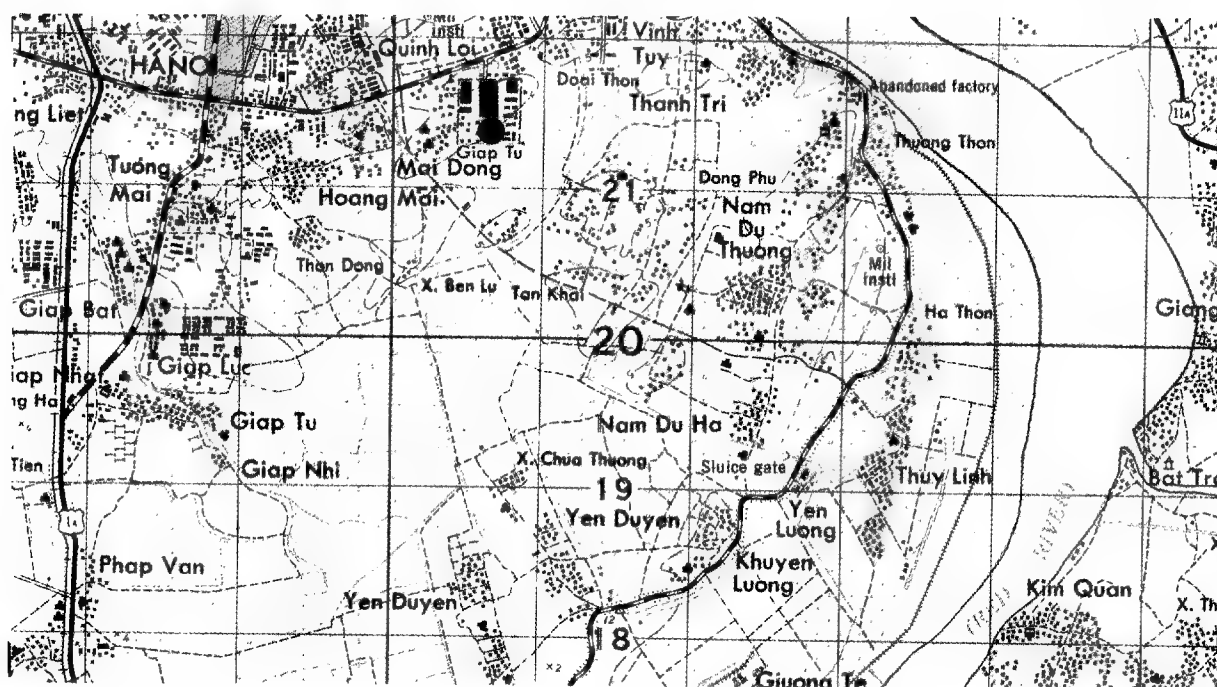
NAME: HA NOI TRANSFORMER SUBSTATION GIAP TU

LOCATION: 2 NM EAST OF HANOI/BAC MAI AIRFIELD

DESCRIPTION: THE SUBSTATION IS A SECURED INSTALLATION CONSISTING OF A CONTROL BUILDING, A SWITCHING YARD, 2 COVERED TRANSFORMERS, AND AN ASSOCIATED BUILDING. THREE 35-KV POWERLINES ARE TIED INTO THE INSTALLATION.

25X1D PHOTO REFERENCES:

MAP REFERENCES: AMS SERIES L7014, SHEET 6150-I, 1ST ED, 1965 (U)  
AMS SERIES JOG(G) 1501, SHEET NF 48-15, 1ST ED, 1965 (U)



D-92

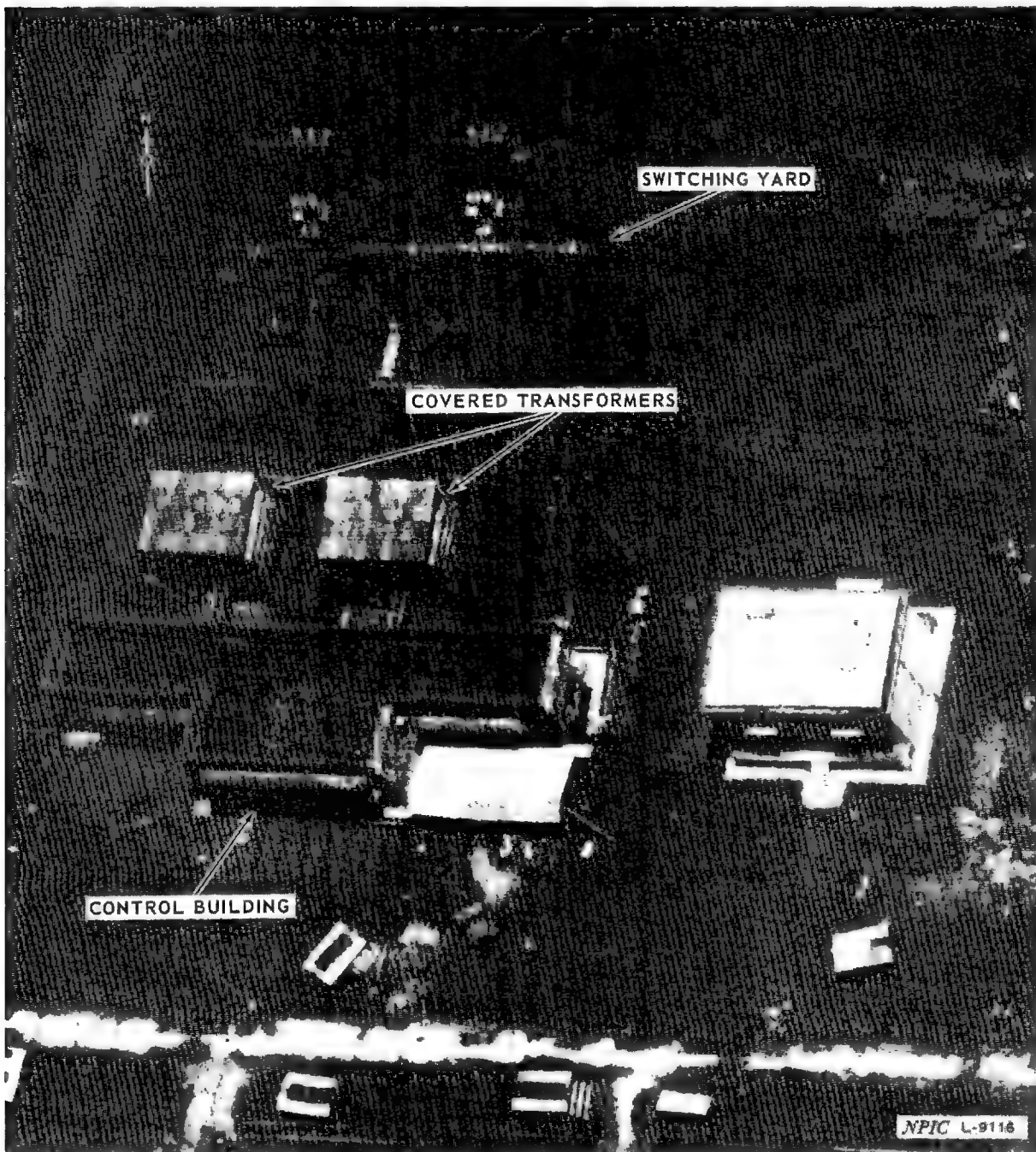
SECRET

25X1C

WJ906213  
UTM COORDINATES

HA NOI TRANSFORMER SUBSTATION GIAP TU

20-59-34N 105-52-20E  
GEOGRAPHIC COORDINATES



D-93

SECRET

25X1C

SECRET

25X1G

R-146/67

25X1A

BE NUMBER	UTM COORDINATES	GEOGRAPHIC COORDINATES
[REDACTED]	XH864913	20-42-47N 106-47-28E

NAME: DO SON TRANSFORMER SUBSTATION

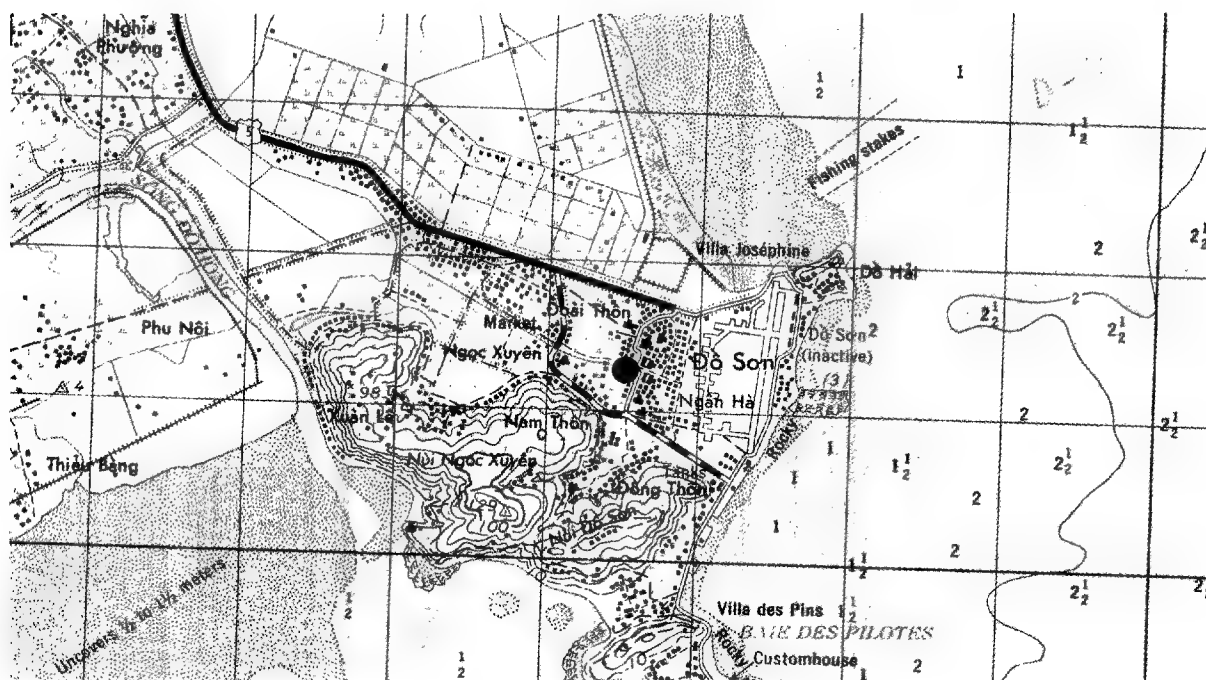
LOCATION: 0.1 NM WEST OF DO SON AND 0.5 NM WEST OF DO SON AIRFIELD

DESCRIPTION: THE SUBSTATION CONSISTS OF A CONTROL/TRANSFORMER/SWITCHING BUILDING. ONE 35-KV AND 4 LOW VOLTAGE POWERLINES ARE TIED INTO THE SUBSTATION.

25X1D

PHOTO REFERENCES: [REDACTED]

MAP REFERENCES: AMS SERIES L7014, SHEET 6350-II, 1ST ED, 1965 (U)  
AMS SERIES JOG(G) 1501, SHEET NF 48-16, 1ST ED, 1965 (U)



D-94

SECRET

25X1G



SECRET

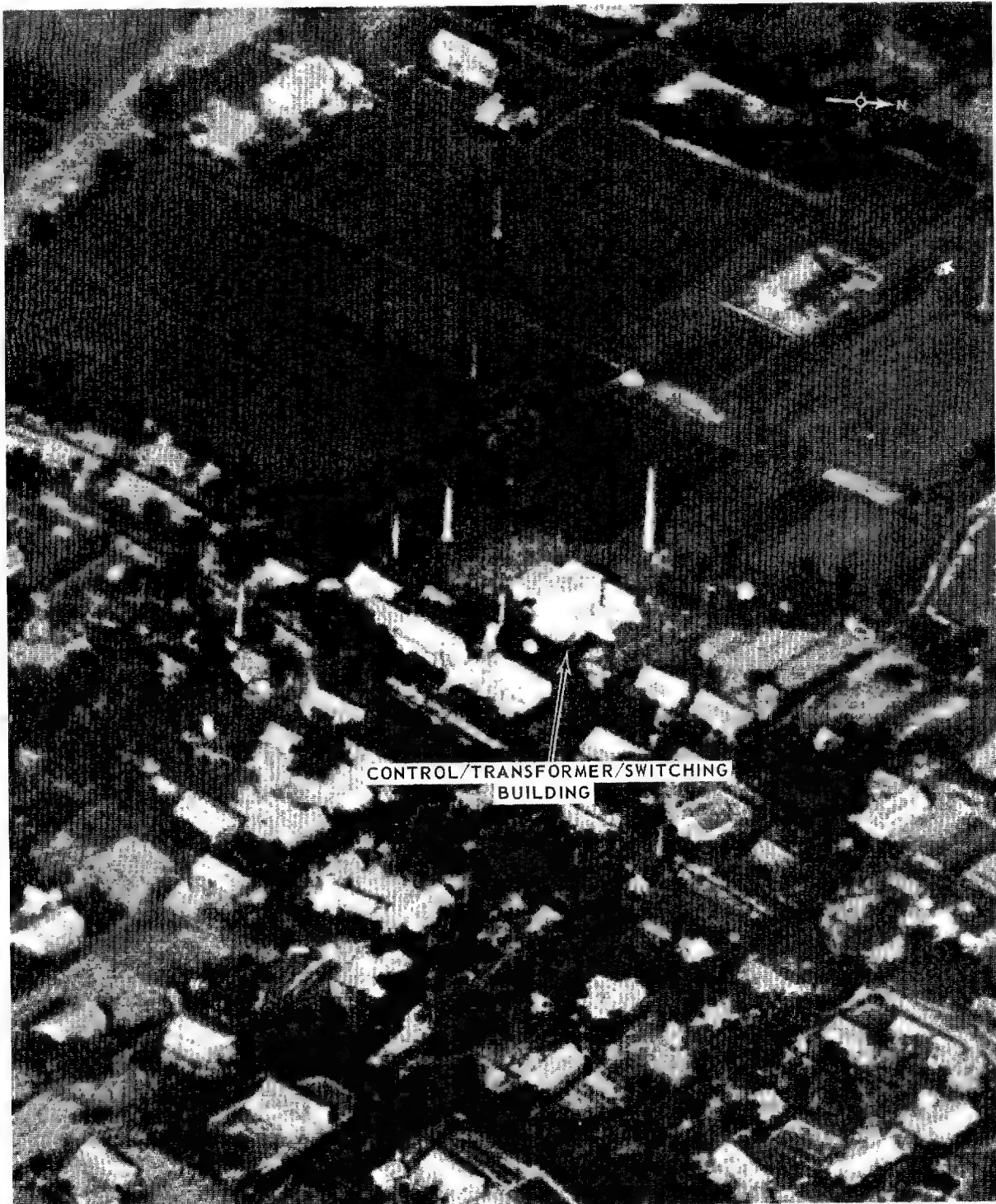
25X1C

R-146/67

DO SON TRANSFORMER SUBSTATION

XH864913  
UTM COORDINATES

20-42-47N 106-47-28E  
GEOGRAPHIC COORDINATES



D-95

SECRET

25X1C



SECRET

25X1A

R-146/67

25X1A

BE NUMBER

WJ993873  
UTM COORDINATES

21-35-15N 105-57-35E  
GEOGRAPHIC COORDINATES

NAME: THAI NGUYEN TRANSFORMER SUBSTATION ORE PLANT

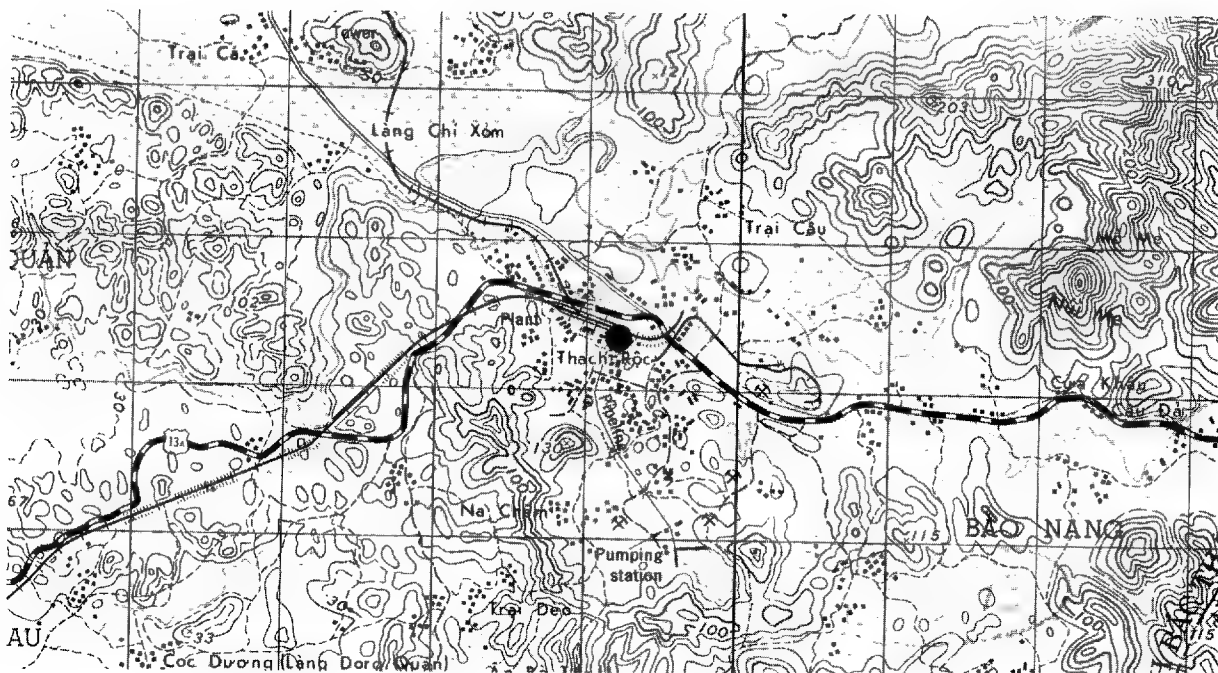
LOCATION: 8 NM WEST OF THAI NGUYEN AT THE TRACH ROC ORE PROCESSING PLANT

DESCRIPTION: THE SUBSTATION IS A SECURED INSTALLATION WITHIN THE ORE PROCESSING PLANT CONSISTING OF A CONTROL BUILDING, 1 COVERED TRANSFORMER, AND A SWITCHING YARD. ONE 35-KV AND 3 LOW VOLTAGE POWERLINES ARE TIED INTO THE SUBSTATION.

25X1D

PHOTO REFERENCES:

MAP REFERENCES: AMS SERIES L7014, SHEET 6152-II, 1ST ED, 1965 (U)  
AMS SERIES JOG(G) 1501, SHEET NF 48-11, 1ST ED, 1965 (U)

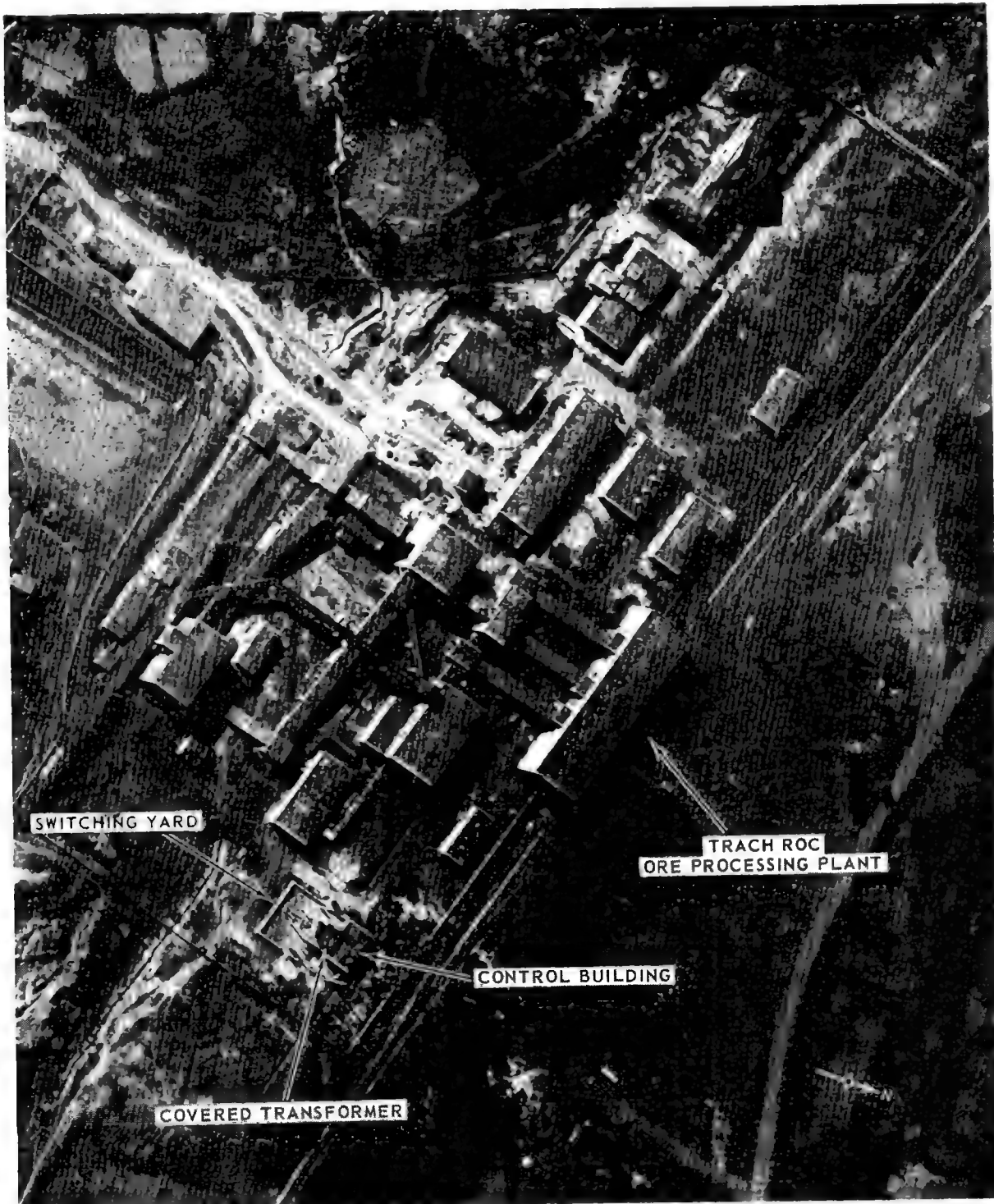


D-96

SECRET

25X1C

THAI NGUYEN TRANSFORMER SUBSTATION ORE PLANT  
WJ993873 21-35-15N 105-57-35E  
UTM COORDINATES GEOGRAPHIC COORDINATES



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SECRET

25X1C

NO FOREIGN DISSEM

25X1A

BE NUMBER

WJ890207  
UTM COORDINATES

20-59-11N 105-51-25E  
GEOGRAPHIC COORDINATES

NAME: HA NOI TRANSFORMER SUBSTATION TUONG MAI

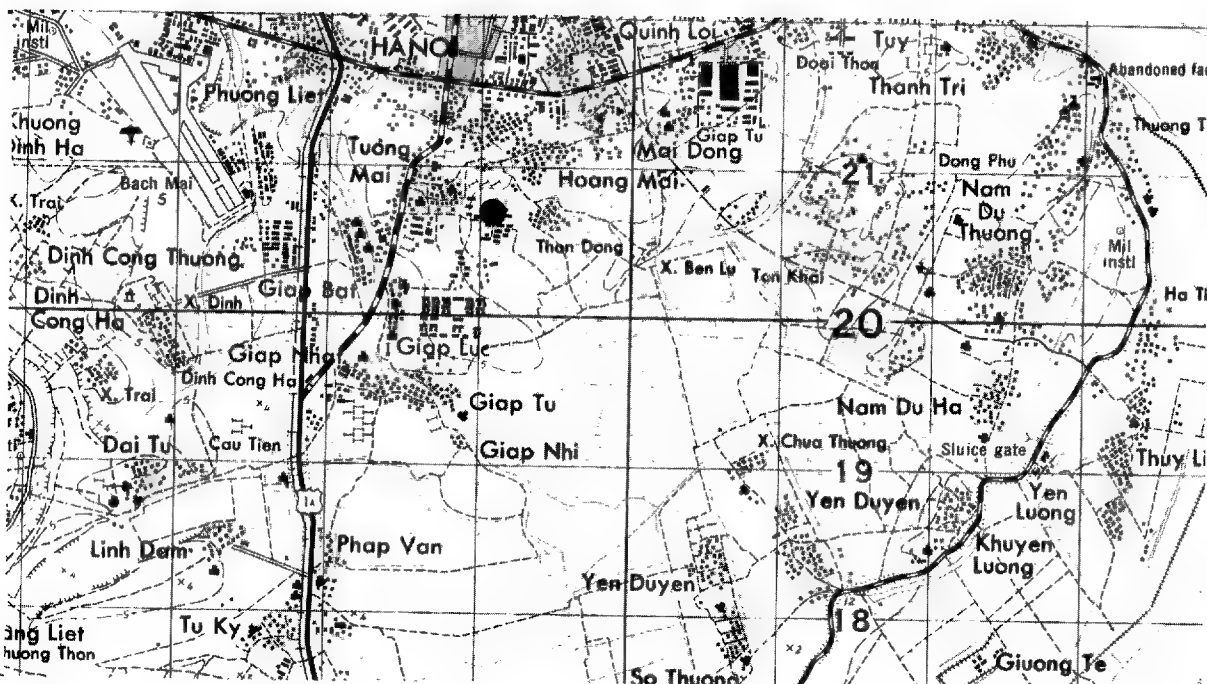
LOCATION: 1.8 NM SOUTH OF HA NOI WITHIN A SECURED WATER TREATMENT PLANT

DESCRIPTION: THE SUBSTATION CONSISTS OF A CONTROL/TRANSFORMER/SWITCHING BUILDING. FIVE MINOR SUBSTATIONS, WHICH SERVE PUMPING STATIONS, ARE CONNECTED TO THE SUBSTATION IN ADDITION TO ONE 35-KV AND 2 LOW VOLTAGE POWERLINES.

25X1D

PHOTO REFERENCES:

MAP REFERENCES: AMS SERIES L7014, SHEET 6150-1; 1ST ED, 1965 (U)  
AMS SERIES JOG(G) 1501, SHEET NF 48-15, 1ST ED, 1965 (U)



D-98

SECRET

NO FOREIGN DISSEM

WJ890207  
UTM COORDINATES

HA NOI TRANSFORMER SUBSTATION TUONG MAI  
20-59-11N 105-51-25E  
GEOGRAPHIC COORDINATES



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SECRET

NO FOREIGN DISSEM

25X1A

BE NUMBER

WJ718274  
UTM COORDINATES

21-02-56N 105-41-27E  
GEOGRAPHIC COORDINATES

NAME: HA NOI TRANSFORMER SUBSTATION SON DONG

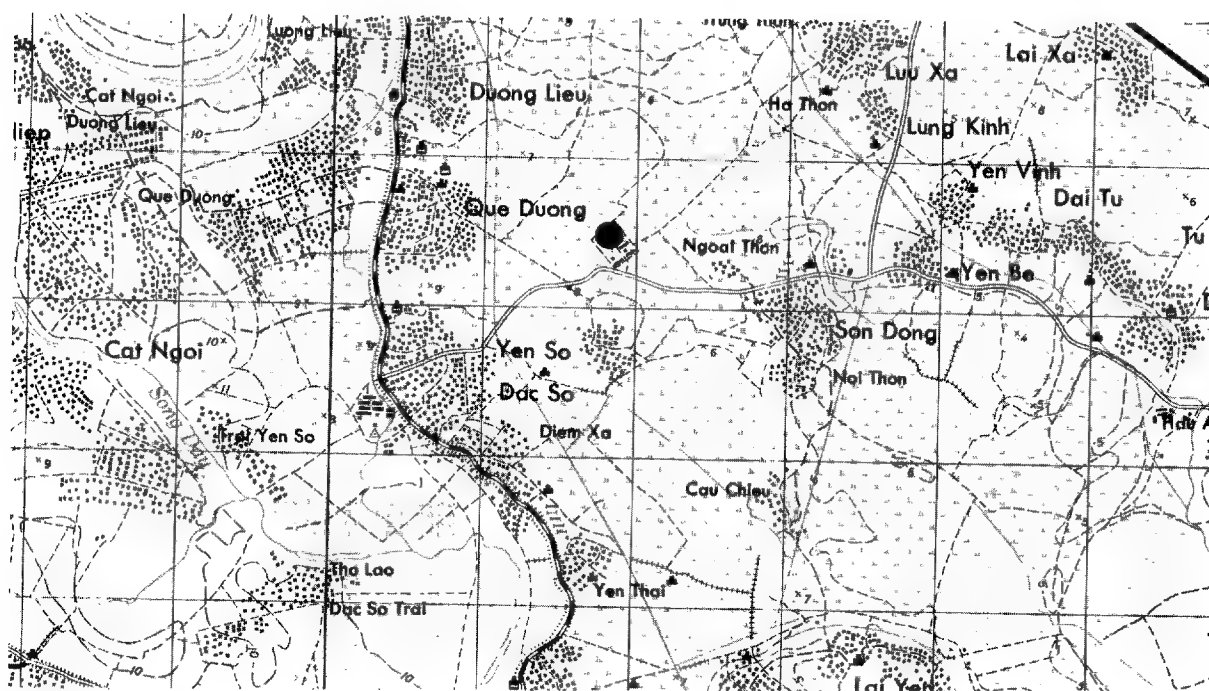
LOCATION: 8.6 NM WNW OF HA NOI WITHIN THE SECURED AREA OF THE HA NOI RECEIVING STATION SON DONG

DESCRIPTION: THE SUBSTATION CONSISTS OF A CONTROL/TRANSFORMER/SWITCHING BUILDING. ONE 35-KV AND 2 LOW VOLTAGE POWERLINES ARE TIED INTO THE SUBSTATION.

25X1D

PHOTO REFERENCES:

MAP REFERENCES: AMS SERIES L7014, SHEET 6151-III, 1ST ED, 1965 (U)  
AMS SERIES JOG(G) 1501, SHEET NF 48-11, 1ST ED, 1965 (U)



D-100

SECRET

25X1C

NO FOREIGN DISSEM



SECRET

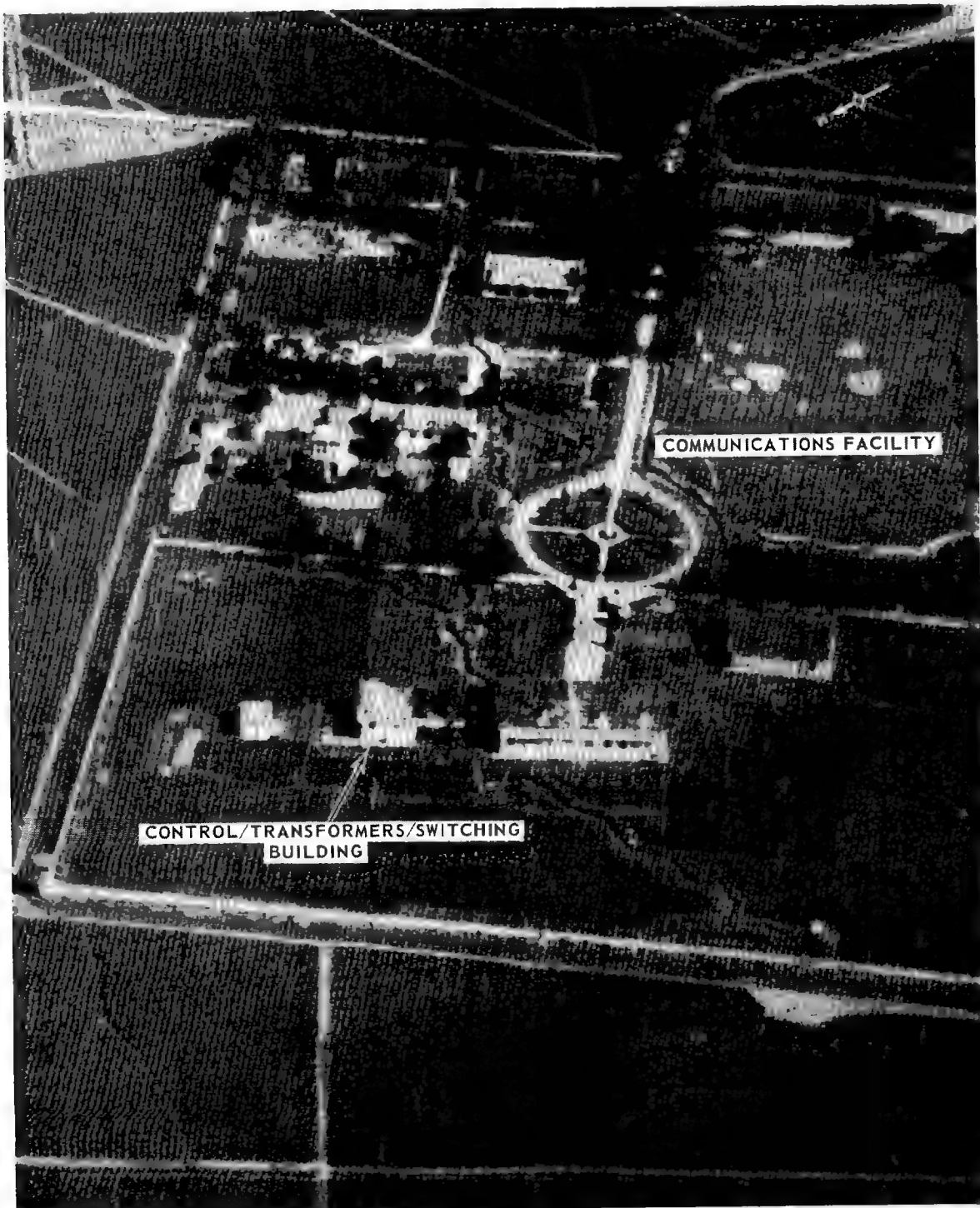
25X1C

R-146/67

HA NOI TRANSFORMER SUBSTATION SON DONG

WJ718274  
UTM COORDINATES

21-02-56N 105-41-27E  
GEOGRAPHIC COORDINATES



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SECRET

25X1C



25X1A

BE NUMBER

XK812171  
UTM COORDINATES

21-50-57N 106-45-13E  
GEOGRAPHIC COORDINATES

NAME: LANG SON TRANSFORMER SUBSTATION

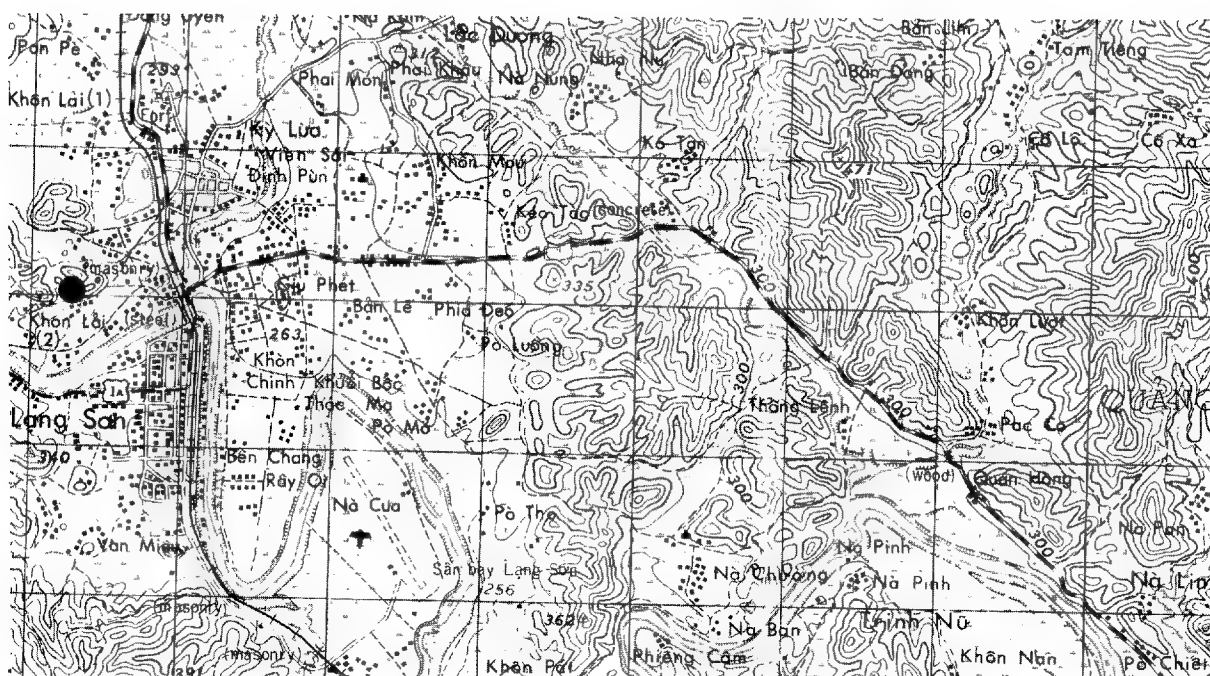
LOCATION: 0.6 NM NE OF LANG SON

DESCRIPTION: THE SUBSTATION IS A SECURED INSTALLATION CONSISTING OF A CONTROL AREA, A TRANSFORMER, AND A SWITCHING YARD. TWO PROBABLE 35-KV AND 2 POSSIBLE LOW VOLTAGE POWERLINES ARE TIED INTO THIS SUBSTATION.

25X1D

PHOTO REFERENCES:

MAP REFERENCES: AMS SERIES L7014, SHEET 6352-1, 1ST ED, 1965 (U)  
AMS SERIES JOG(G) 1501, SHEET NF 48-12, 1965 (U)



D-102

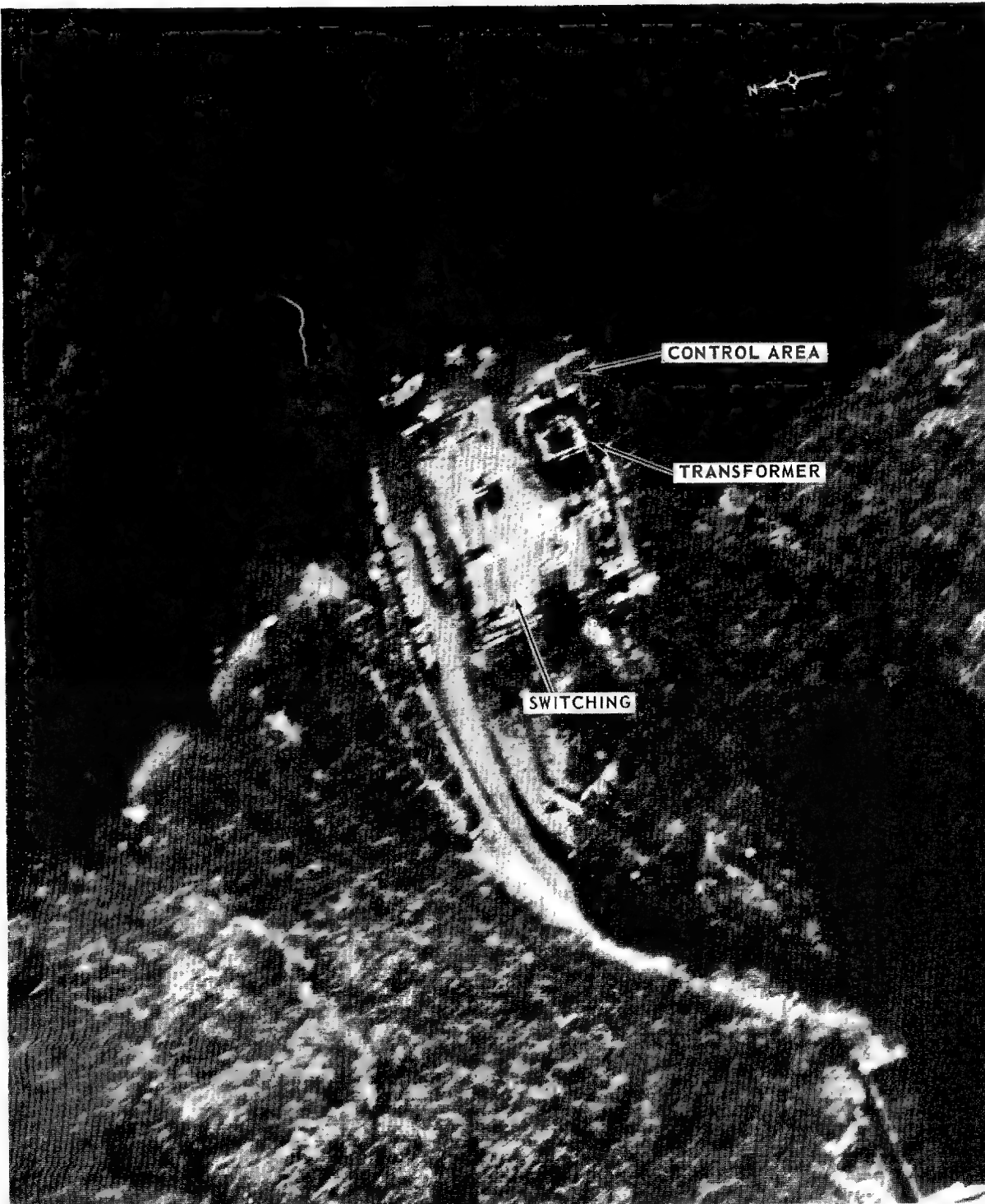
SECRET

25X1C

R-146/67

LANG SON TRANSFORMER SUBSTATION  
XK812171  
UTM COORDINATES

21-50-57N 106-45-13E  
GEOGRAPHIC COORDINATES



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SECRET

25X1C

# **SECTION E**

## **IRRIGATION/PUMPING STATIONS**

**E**

SECRET

25X1C

R-146/67

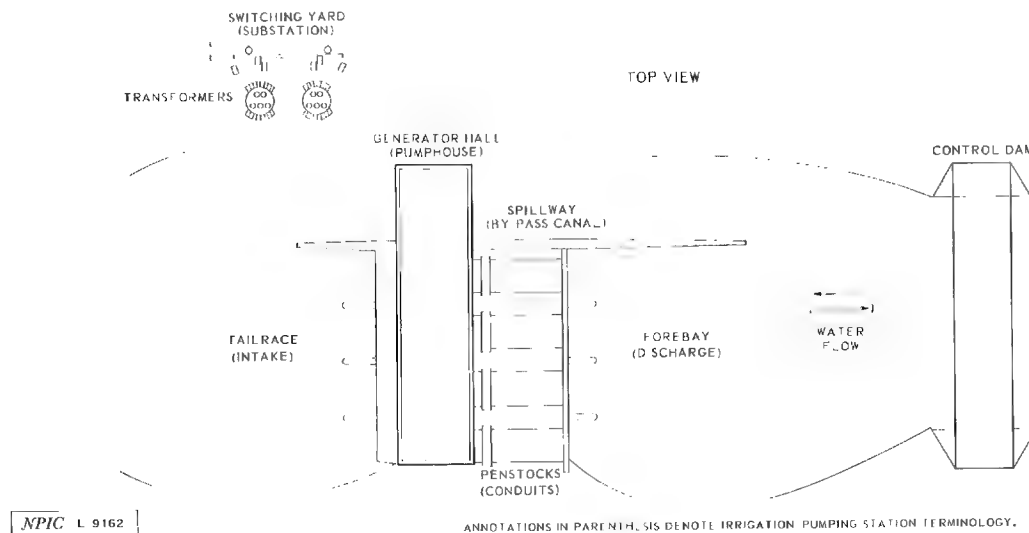
## SECTION E Irrigation/Pumping Stations

This section contains a list of over 300 installations which are tentatively identified as irrigation/pumping stations.

Occasionally, as in the case of the Phu Xa Doai Irrigation Station on page E-32, photography reveals conduits on both sides of the main structure which marks the installation's function.

I/P stations are generally located on a canal or along a river bank and consist of a single-story wood frame or concrete structure (enclosing suction pumps) with 1 to 20 intake and discharge conduits. These stations have either a small step-down transformer and switching yard or are directly connected by powerlines to a power supply.

In this section each of the facilities is located on a 1:250,000 scale map and is referenced by UTM and geographic coordinates and province. Confirmed I/P stations are indicated by ● and unconfirmed installations are indicated by ▲. Photographic examples of both confirmed and unconfirmed installations are also included, beginning on page E-26.



SECRET

25X1C

**IRRIGATION/PUMPING STATIONS**

MAP KEY	INSTALLATION NAME	UTM COORDINATES	MAP SHEET	GEOGRAPHIC COORDINATES	PROVINCE
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**JOG (G) NF 48-6**

1 ▲	Lo Thang	UK943854	5753-I	222823N 1035819E	Lao Cai
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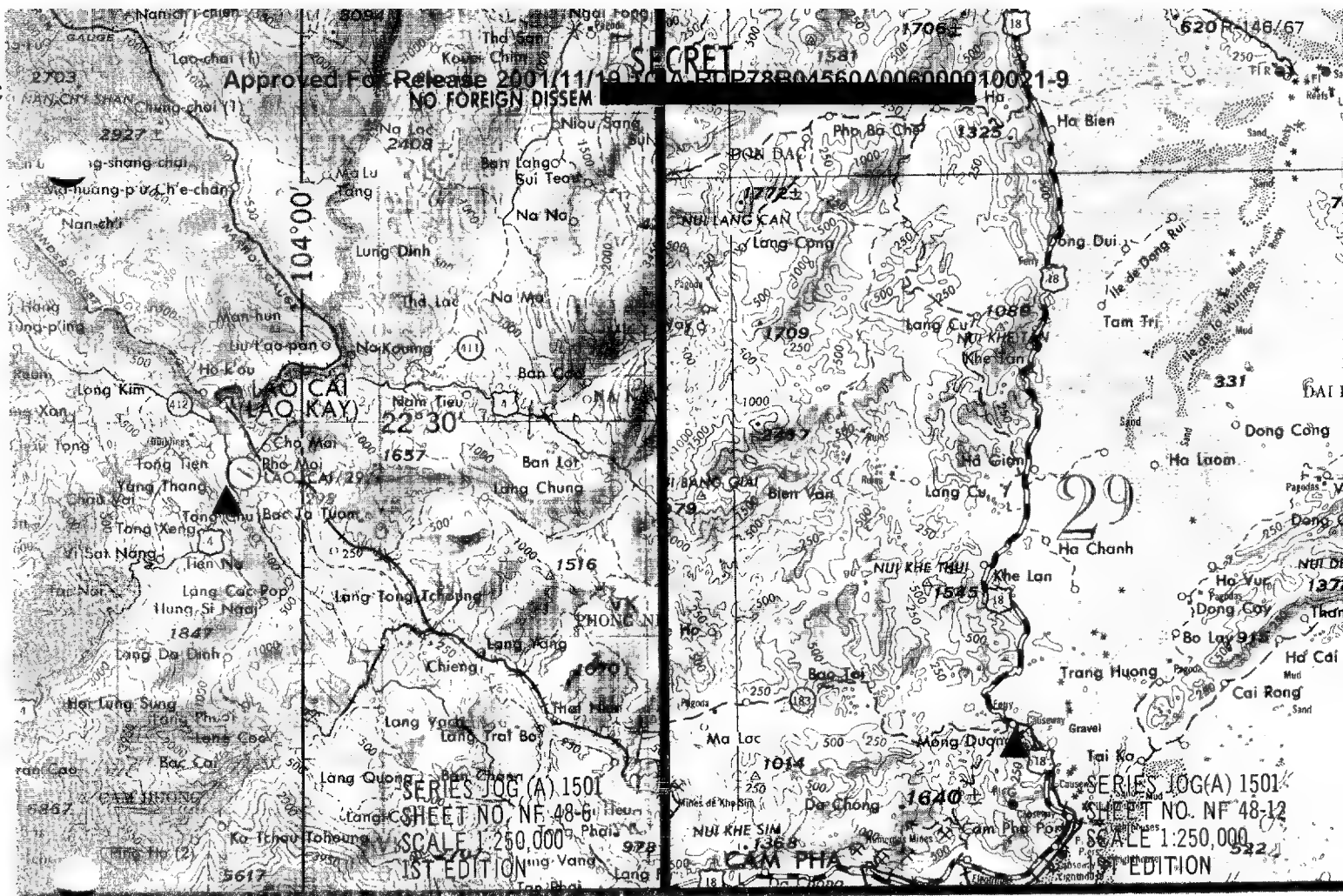
**JOG (G) NF 48-12**

1 ▲	Mong Duong	YJ433297	6451-II	210318N 1072028E	Quang Ninh
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**JOG (G) NE 48-12**

1 ●	Dong Hoi	XE727330	6343-IV	172832N 1063738E	Quang Binh
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IRRIGATION/PUMPING STATIONS  
JOG (G) NE 48-11

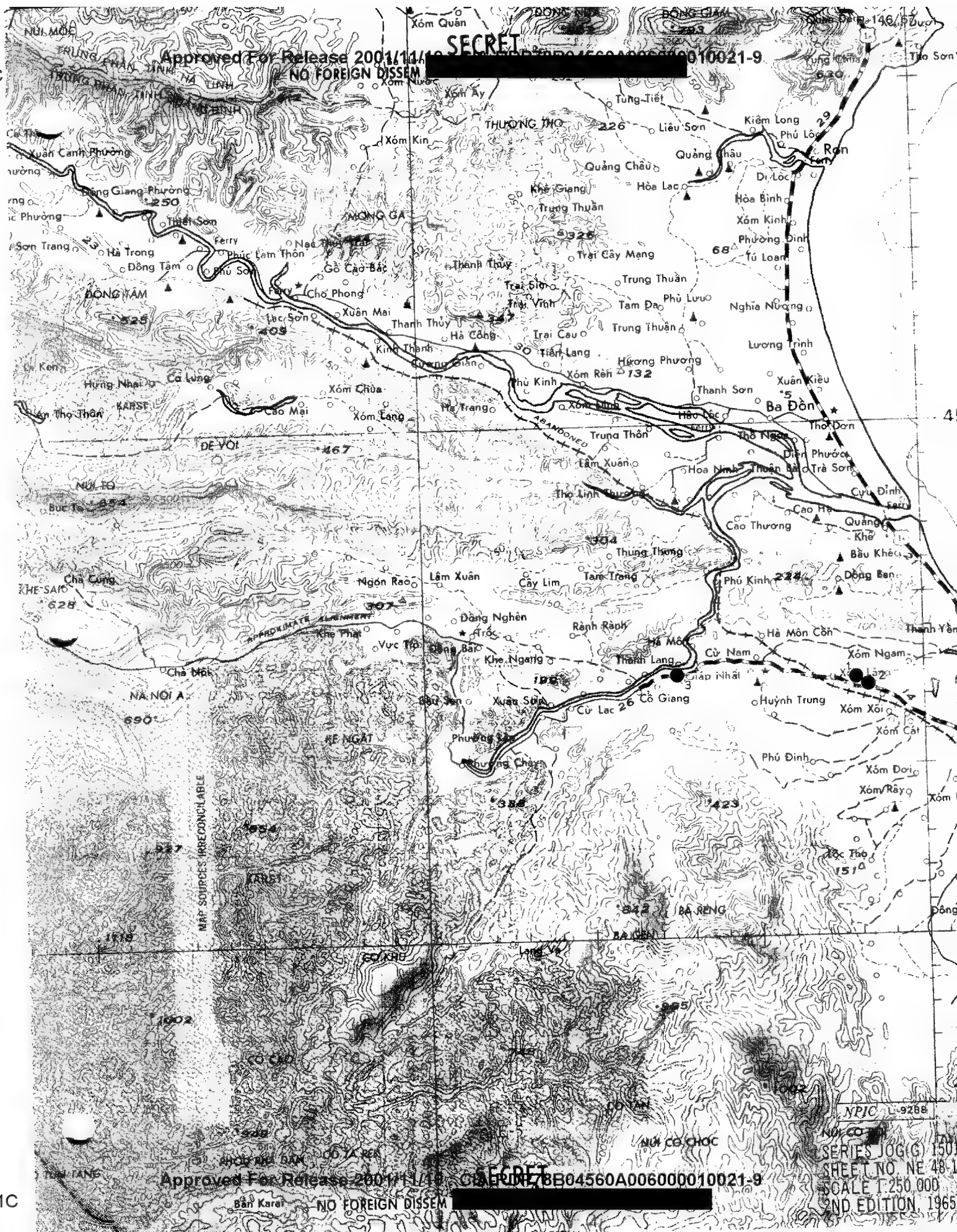
MAP KEY	INSTALLATION NAME	UTM COORDINATES	MAP SHEET	GEOGRAPHIC COORDINATES	PROVINCE
1	● Dien Loc, (1)	XE561493	6244-II	173730N 1062815E	Quang Binh
2	● Dien Loc, (2)	XE560493	6244-II	173729N 1062813E	Quang Binh
3	● Giap Nhi	XE461491	6244-II	173744N 1062238E	Quang Binh

Approved For Release 2001/11/19 : CIA-RDP78B04560A006000010021-9  
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IRRIGATION/PUMPING STATIONS  
 JOG (6) NE 48-7

MAP KEY	INSTALLATION NAME	UTM COORDINATES	MAP SHEET	GEOGRAPHIC COORDINATES	PROVINCE
1	● Ban Van	WF352903	6046-I	185425N 1052006E	Nghe An
2	● Ben Bo	WF321802	6046-I	184855N 1051817E	Hai Duong
3	● Dong Can	WF734484	6146-III	183137N 1054145E	Ia Tinh
4	● Dong My/Vinh (See P. E-29)	WF802414	6145-I	182747N 1054536E	Ha Tinh
5	● Dong Son	WF574590	6146-III	183721N 1053241E	Ha Tinh
6	● Duc Hau	WF684577	6146-III	183635N 1053854E	Nghe An
7	● Khuc Long	WF464684	6046-II	184232N 1052628E	Nghe An
8	● Kin Liem	WF351895	6046-I	185358N 1052004E	Nghe An
9	● L. Bach	WF626664	6146-III	184123N 1053539E	Nghe An
10	● My Hoa	WF607784	6146-IV	184814N 1053433E	Thanh Hoa
11	● Ngoc Hoi	WF684613	6146-III	183838N 1053950E	Nghe An
12	● Nhan Hau	XE507976	6245-II	180326N 1062522E	Ia Tinh
13	● Ninh	WF745457	6146-III	183005N 1054224E	Ha Tinh
14	● Phu Tho	WF276907	6046-I	185435N 1051542E	Nghe An
15	● Quang Giu	WF679541	6146-III	183440N 1053836E	Nghe An
16	● Quan Pham	WF734549	6146-III	183507N 1054146E	Ha Tinh
17	● Thanh Mao	WF383838	6046-I	185018N 1052142E	Nghe An
18	● Thuong Ho	WF785433	6145-IV	182845N 1054435E	Ha Tinh
19	● Thung Khe, East	WF678683	6146-III	184222N 1053828E	Nghe An
20	● Thuong Khe, West	WF674684	6146-III	184225N 1053824E	Nghe An
21	● Thuong Xa	WF717812	6146-IV	184925N 1054050E	Nghe An
22	● Trung Phu	WF350766	6046-I	184657N 1051958E	Nghe An
23	● Truong Lai	XE490973	6245-II	180338N 1062430E	Ha Tinh
24	● Van Lang Ben Thuy	WF703597	6146-III	183743N 1053958E	Nghe An
25	● Ve Chinh	WF688543	6146-III	183440N 1053838E	Nghe An
26	● Xa Doci	WF649754	6146-IV	184614N 1053656E	Nghe An
27	● Xuam Lam	WF388720	6046-II	184428N 1052205E	Nghe An
28	● Xom Moi Xa	WF744455	6146-III	183003N 1054210E	Ha Tinh
29	● Yen Dong	WF718602	6146-III	183803N 1054048E	Nghe An
30	● Ngoc Son	WF388721	6046-II	184428N 1052108E	Nghe An
31	● San Dinh	WF762347	6145-IV	182409N 1054320E	Ia Tinh
32	● Lac Di, West	XE408987	6245-II	180425N 1061951E	Ia Tinh
33	● Lac Di, East	XE413985	6245-II	180420N 1062005E	Ha Tinh
34	● Nam Dong	WF544674	6146-III	184157N 1053055E	Ia Tinh
35	▲ Linh Cam	WF592486	6146-III	183145N 1053342E	Ha Tinh
36	▲ Xom Dinh	WF614574	6146-III	183638N 1050452E	Ha Tinh

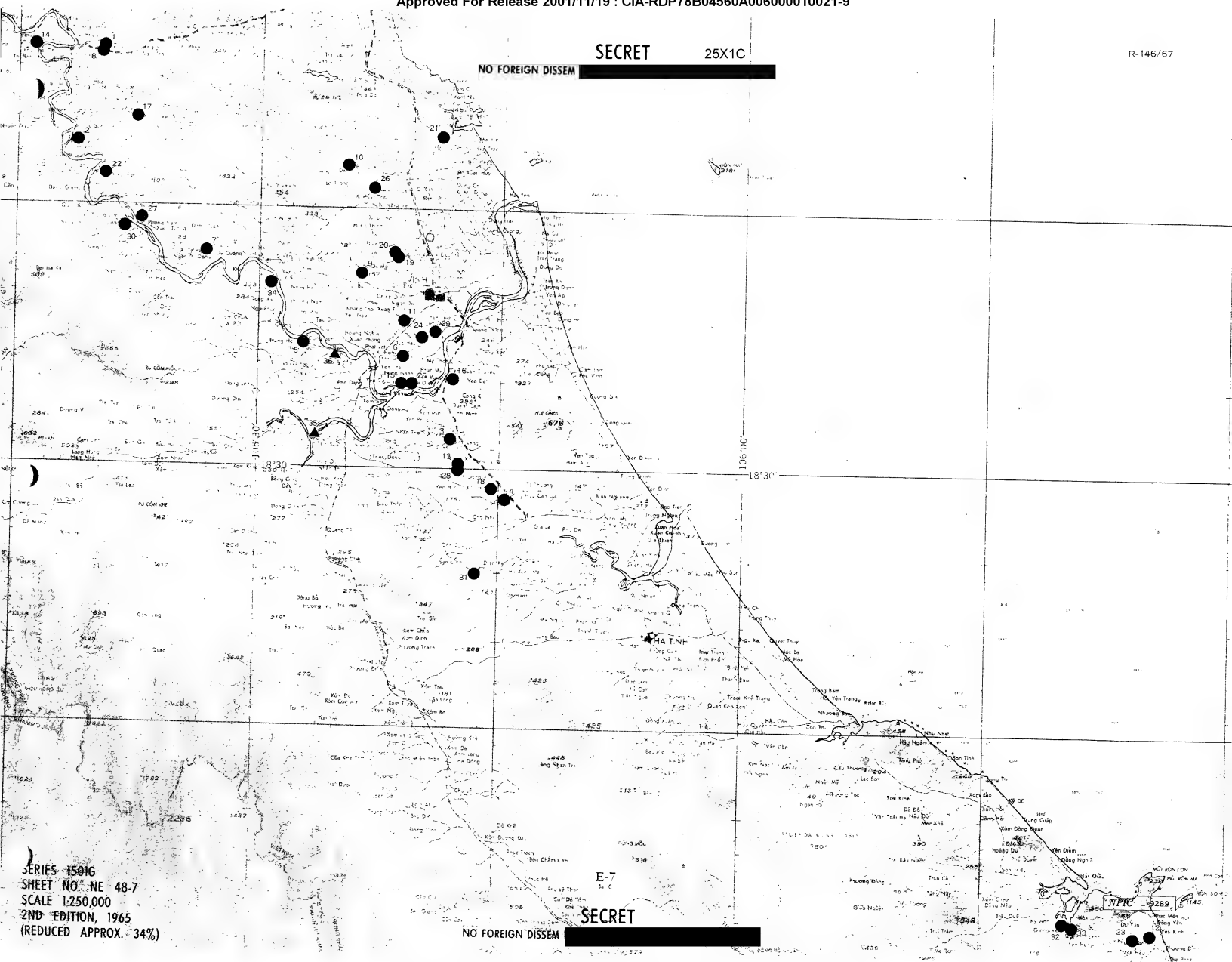
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R-146/67

NO FOREIGN DISSEM



SERIES 1501G  
SHEET NO. NE 48-7  
SCALE 1:250,000  
2ND EDITION, 1965  
(REDUCED APPROX. 34%)

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NO FOREIGN DISSEM

IRRIGATION/PUMPING STATIONS

JOG (G) NF 48-15

MAP KEY	INSTALLATION NAME	UTM COORDINATES	MAP SHEET	GEOGRAPHIC COORDINATES	PROVINCE
1	● An Lai	XJ380020	6250-I	204853N 1061920E	Quang Ninh
2	● Bang Trach, West	XII461649	6249-I	202848N 1062503E	Thai Binh
3	● Bang Trach, East	XII478651	6249-I	202848N 1062508E	Thai Binh
4	● Binh Di	XJ425091	6250-I	205240N 1062209E	Nghe An
5	● Binh Hoang	XII388969	6250-I	204556N 1062005E	Hai Duong
6	● Cao Thon	XII262793	6250-III	203638N 1061241E	Thai Binh
7	● Cao Xa	XII137931	6250-III	204408N 1060534E	Nam Ha
8	● Cau Cong	XII223829	6250-III	203838N 1061027E	Thai Binh
9	● Cau Due	XJ317000	6250-I	204750N 1061522E	Hai Duong
10	● Co Cham	XJ487167	6250-I	205650N 1062548E	Hai Duong
11	● Cong Xon, North	XII083698	6250-III	203129N 1060223E	Nam Ha
12	● Cong Xon, South	XII081696	6250-III	203119N 1060218E	Nam Ha
13	● Co Xa (1)	XII395720	6250-II	203239N 1062020E	Thai Binh
14	● Co Xa (2)	XII396719	6250-II	203237N 1062022E	Thai Binh
15	● Cuc Bo	XII381907	6250-II	204247N 1061937E	Hai Duong
16	● Cu Pham	XJ511194	6250-I	205815N 1062712E	Hai Duong
17	● Dai Lai	XII379615	6249-I	202654N 1062023E	Thai Binh
18	● Dai Mo	WJ796217	6150-I	205950N 1054600E	Ha Tay
19	● Dan Tham	WJ839121	6150-I	205434N 1054827E	Ha Tay
20	● Dia Man	WII936963	6150-I	204558N 1055357E	Ha Tay
21	● Dong Ky	WJ761101	6150-II	205326N 1054356E	Ha Tay
22	● Dong Lac	XII309759	6250-II	203445N 1061522E	Thai Binh
23	● Dong My	XJ114069	6250-IV	205139N 1060412E	Hung Yen
24	● Do Thon, East	XII083647	6249-IV	202843N 1060213E	Nam Ha
25	● Do Thon, West	XII081647	6249-IV	202843N 1060207E	Nam Ha
26	● Do Xa	XII404998	6250-I	204750N 1062052E	Nghe An
27	● Duc Khe	WII831792	6150-II	203644N 1054753E	Ha Rac
28	● Duyen Phuc	XII279770	6250-III	203521N 1061340E	Thai Binh
29	● Gao Ly	XII274957	6250-IV	204529N 1061328E	Hung Yen
30	● Ha Dinh	WJ851214	6150-I	205935N 1054908E	Ha Noi
31	● Ha Dong/Van Phuc	WJ814198	6150-I	205818N 1054618E	Ha Noi
32	● Ha Dong/Yen Phuc	WJ819189	6150-I	205819N 1054718E	Ha Noi
33	● Ha Duc	WJ737046	6150-IV	205028N 1054231E	Ha Tay
34	● Hai Yen	XII178843	6250-III	203923N 1060751E	Hung Yen
35	● Hao Thon	XJ103137	6250-IV	205605N 1060237E	Hung Yen
36	● Ha Thon	XII033801	6150-II	203708N 1055928E	Nam Ha
37	● Hau Tai (1)	WJ819185	6150-I	205802N 1054717E	Ha Tay
38	● Hau Tai (2)	XII323675	6250-II	203010N 1061609E	Thai Binh

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25X1C

NPIC/R-146/67

NO FOREIGN DISSEM

IRRIGATION/PUMPING STATIONS  
JOG (G) NF 48-15 (Continued)

MAP KEY	INSTALLATION NAME	UTM COORDINATES	MAP SHEET	GEOGRAPHIC COORDINATES	PROVINCE
39	● Hoa Xuyen	XJ085101	6250-IV	205325N 1060236E	Hung Yen
40	● Hoi Trung	WH884781	6150-II	203608N 1055101E	Nam Ha
41	● Ich Vinh	WJ873146	6150-I	205550N 1055020E	Ha Tay
42	● Kiem Da	XH030418	6149-I	201622N 1055910E	Ninh Binh
43	● Lac Dao	XH276533	6249-IV	202231N 1061324E	Nam Ha
44	● La Khe Tay (1)	WJ781185	6150-I	205803N 1054503E	Ha Tay
45	● Lam Dien	WJ761101	6150-IV	205326N 1054357E	Ha Tay
46	● Lang Kieu	WH629137	6149-III	200112N 1053608E	Thanh Hoa
47	● La Trieu	XH361846	6250-II	203930N 1061820E	Thai Binh
48	● Lo Xa	XH341723	6250-II	203249N 1061710E	Thai Binh
49	● Luong Son (See P. E-28)	WJ649141	6150-I	205539N 1053723E	Ha Tay
50	● Mai Linh	WJ763140	6150-IV	205536N 1054406E	Ha Tay
51	● Mai Xa	XH234845	6250-III	203927N 1061105E	Hung Yen
52	● Mau Luong	WJ832178	6150-I	204738N 1054800E	Ha Noi
53	● Mieu Vi	XH154832	6250-III	203845N 1060630E	Hung Yen
54	● My Dong	XH322901	6250-II	204225N 1061610E	Hai Duong
55	● My Lam	WH953929	6150-II	204405N 1055450E	Ha Tay
56	● Ngoc Boi	WH629137	6149-III	200120N 1053548E	Thanh Hoa
57	● Ngoc Lo	XJ455140	6250-I	205518N 1062357E	Ha Tinh
58	● Ngoc Truc	WF814210	6150-I	205924N 1054700E	Ha Noi
59	● Ngo Xuyen (1)	XJ023205	6150-I	205906N 1055906E	Hung Yen
60	● Nguyen Lam (1)	XH332705	6250-II	203148N 1061640E	Thai Binh
61	● Nguyen Lam (2)	XH330703	6250-II	203145N 1061638E	Thai Binh
62	● Nham Lang	XH272817	6250-II	203757N 1061320E	Thai Binh
63	● Nhu Quynh	WJ020201	6150-I	205855N 1055855E	Hung Yen
64	● Ninh Phuc	XH062921	6250-III	204336N 1060109E	Ha Tinh
65	● Phong Lam	XJ379045	6250-I	205018N 1061939E	Hai Duong
66	● Phuc Tien	XH230808	6250-III	203725N 1061049E	Thai Binh
67	● Phuc Trung	XH351668	6249-I	202948N 1061746E	Thai Binh
68	● Phu Dam	WH963738	6150-II	203341N 1055526E	Nam Ha
69	● Phuong Khe	XJ535207	6250-I	205900N 1062840E	Ha Tay
70	● Phu Xuyen	XJ440217	6250-I	205934N 1062308E	Thanh Hoa
71	● Quang Le	XH265910	6250-III	204258N 1061256E	Hung Yen
72	● Quang Nhan, East	WH595199	6149-III	200438N 1053418E	Thanh Hoa
73	● Quang Nhan, West	WH594198	6149-III	200438N 1053411E	Thanh Hoa
74	● Quang Xa	XH253948	6250-IV	204500N 1061215E	Hung Yen
75	● Quinh Lu	WH878373	6149-II	201405N 1055027E	Ninh Binh
76	● Quynh Do, North	WJ877155	6150-I	205623N 1055040E	Ha Tay

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25X1C

NO FOREIGN DISSEM



IRRIGATION/PUMPING STATIONS  
 JOG (G) NF 48-15 (Continued)

MAP KEY	INSTALLATION NAME	UTM COORDINATES	MAP SHEET	GEOGRAPHIC COORDINATES	PROVINCE
77	● Quynh Do, South	WJ878150	6150-I	205607N 1055037E	Ha Tay
78	● Thanh Quyet	WII981511	6149-I	202126N 1055625E	Nam Ha
79	● Thanh Than	WJ787093	6150-I	205300N 1054528E	Ila Tay
80	● Thieu Bat, East	WII823953	6150-I	204523N 1054727E	Ha Tay
81	● Thieu Bat, West	WII822954	6150-I	204525N 1054725E	Ha Tay
82	● Tho Khe	XII225825	6250-III	203822N 1061031E	Thai Binh
83	● Thung Thon	WH921915	6150-II	204323N 1055358E	Ha Tay
84	● Thuy Binh	XII351650	6249-I	202852N 1061745E	Thai Binh
85	● Thuong Thon	XII291854	6250-III	203955N 1061422E	Hung Yen
86	● Tien Tien	WJ629113	6150-IV	205412N 1053620E	Ha Tay
87	● Tranh Chu	XII471924	6250-II	204338N 1062452E	Thai Binh
88	● Trieu Long	XJ505095	6250-I	205256N 1062646E	Hai Duong
89	● Trung Dao	XJ079071	6250-IV	205145N 1060209E	Hung Yen
90	● Trung Hoa	XII179833	6250-III	203851N 1060756E	Thai Binh
91	● Trung Lap	WJ870969	6150-I	204618N 1055012E	Ha Tay
92	● Trung Van	WJ815217	6150-I	205943N 1054705E	Ila Noi
93	● Truyen My, North	WII891940	6150-II	204445N 1055121E	Ha Tay
94	● Truyen My, South	WII896938	6150-II	204434N 1055138E	Ila Tay
95	● Tuong Phuong	XII349848	6250-II	203935N 1061745E	Thai Binh
96	● Tuong Thuy	XII045814	6250-III	203753N 1060020E	Nam Ha
97	● Ue Tai	XII455994	6250-I	204723N 1062355E	Hai Duong
98	● Van Dien	WJ886164	6150-I	205652N 1055109E	Ila Noi
99	● Van Lam	XII329519	6249-I	202141N 1061628E	Thai Binh
100	● Van Lang	WII926948	6150-I	204508N 1055322E	Ila Tay
101	● Van Mieu Xom	WJ847174	6150-I	205728N 1054858E	Ila Noi
102	● Van Trai	WII882969	6150-I	204620N 1055000E	Ha Tay
103	● Van Trang	WJ746157	6150-IV	205633N 1054305E	Ha Tay
104	● Van Tri	XJ463008	6250-I	204808N 1062419E	Hai Duong
105	● Vien Huang	WII870961	6150-I	204540N 1055010E	Ha Tay
106	● Viet Yen	XII293837	6250-III	203904N 1061432E	Thai Binh
107	● Xat Thon	WII686125	6149-III	200035N 1053928E	Thanh Hoa
108	● Xom Phuc Da	WJ595218	6150-IV	205950N 1053421E	Ha Tay
109	● Xom Trang	XII009739	6150-II	203346N 1055804E	Nam Ha
110	● Yen Binh, North	WH888375	6149-II	201404N 1055101E	Ninh Binh
111	● Yen Binh, South	WII890372	6149-II	201353N 1055110E	Ninh Binh
112	● Yen Duyen (1)	WJ935100	6150-I	205320N 1055356E	Ila Noi
113	● Yen Nhan	XJ456028	6250-I	204914N 1062400E	Hai Duong
114	● Yen Xa	XJ085151	6250-IV	205605N 1060236E	Hung Yen

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R-146/67

NO FOREIGN DISSEM

# IRRIGATION/PUMPING STATIONS

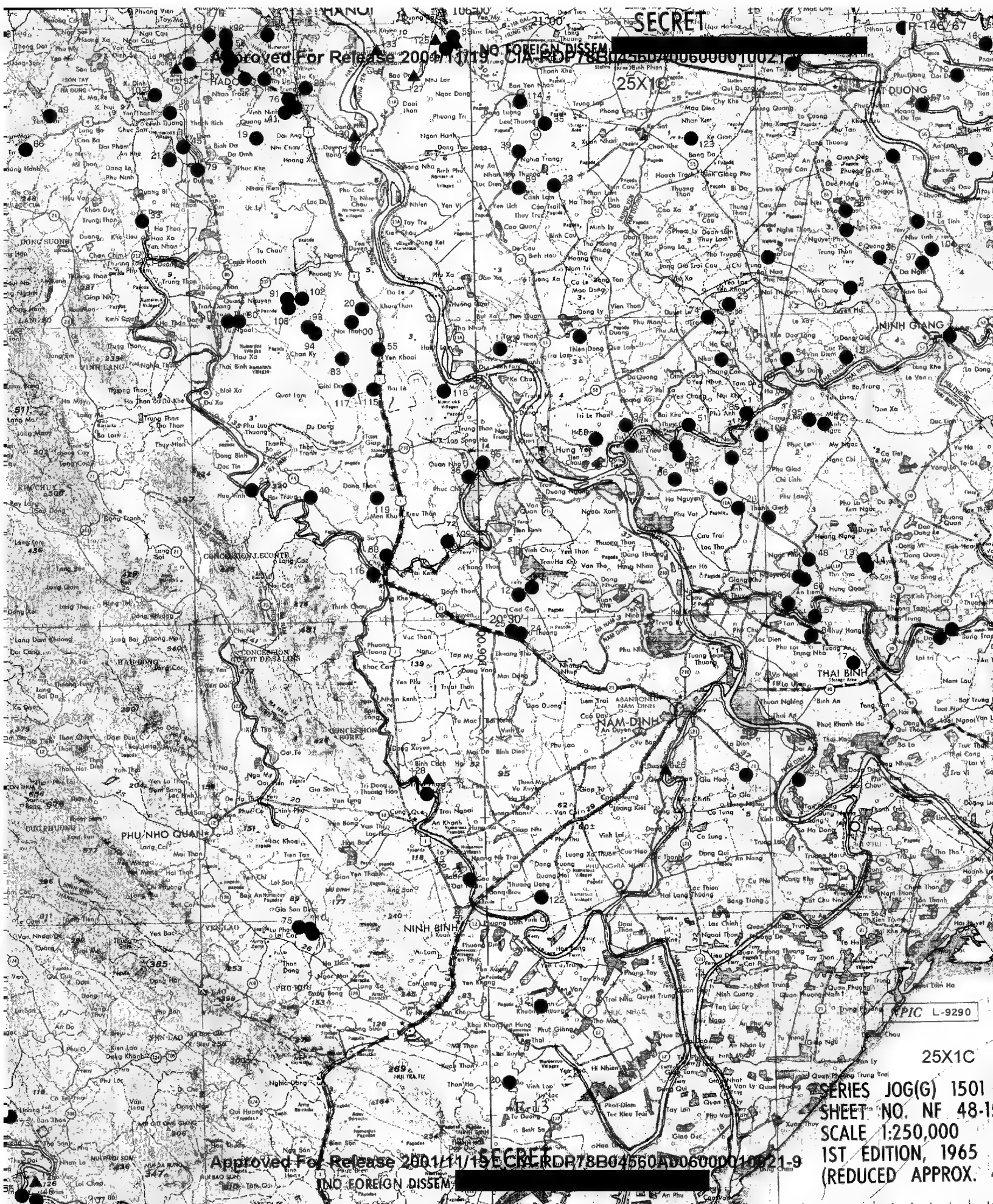
## JOG (G) NF 48-15 (Continued)

MAP KEY	INSTALLATION NAME	UTM COORDINATES	MAP SHEET	GEOGRAPHIC COORDINATES	PROVINCE
115 ●	Bai Le	WH954883	6150-II	204136N 1055458E	Ha Dong
116 ●	Dau Dang	WH939720	6150-II	203245N 1055401E	Nam Ha
117 ●	Cuu Thon	WH928888	6150-II	204154N 1055318E	Ha Dong
118 ●	Sao Thon	XH006877	6150-II	204118N 1055800E	Ha Dong
119 ●	An Xa	WH954796	6150-II	203655N 1055459E	Nam Ha
120 ●	Yen Mo	XH070235	6249-III	200628N 1060127E	Ninh Binh
121 ●	Yen Van	XH097317	6249-III	201055N 1060258E	Ninh Binh
122 ●	Quang Nap	XH096414	6249-IV	201610N 1060301E	Nam Dinh
123 ●	Thach Loi	XJ243195	6250-IV	205326N 1061148E	Hai Duong
124 ●	Xuan Dai	XJ337184	6250-I	205750N 1061713E	Hai Duong
125 ●	Nhu Quynh	XJ020200	6150-I	205848N 1055855E	Hung Yen
126 ▲	Tieu Coc (See P. E-35)	XH207536	6249-IV	202242N 1060925E	Nam Ha
127 ▲	Nhu Lan	XJ993172	6150-I	205715N 1055719E	Hung Yen
128 ▲	Tram Phuong (See P. E-39)	WH999508	6149-I	202116N 1055727E	Nam Ha
129 ▲	Lang Kieu (2)	WH629137	6149-III	200112N 1053608E	Thanh Hoa
130 ▲	Yen Duyen (2)	WJ935100	6150-I	205320N 1055356E	Ha Noi
131 ▲	Ngo Xuyen (See P. E-43)	XJ023205	6150-I	205811N 1055911E	Hung Yen
132 ▲	La Khe Tay (See P. E-37)	WJ784186	6150-I	205809N 1054514E	Ha Tay
133 ▲	Xom Noi	WJ960190	6150-I	205821N 1055525E	Hung Yen

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NO FOREIGN DISSEM



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Approved For Release 2004/11/19 : CIA-RDP78B04560AD06000010021-9

Approved For Release 2001/11/15 : CIA-RDP78B04560AD06000010021-9

25X1C  
SERIES JOG(G) 1501  
SHEET NO. NF 48-1  
SCALE 1:250,000  
1ST EDITION, 1965  
(REDUCED APPROX.)

IRRIGATION/PUMPING STATIONS  
 JOG (G) NF 48-11

MAP KEY	INSTALLATION NAME	UTM COORDINATES	MAP SHEET	GEOGRAPHIC COORDINATES	PROVINCE
1 ●	Bac Giang, N (See P. E-26)	XJ246565	6251-IV	211828N 1061204E	Ila Bac
2 ●	Bac Giang, South	XJ247555	6251-IV	211800N 1061210E	Ha Bac
3 ●	Cam Cao	WJ460391	6051-II	210915N 1052635E	Ha Tay
4 ●	Cam Hoang	WJ959528	6151-I	211637N 1055531E	Vinh Phuc
5 ●	Cat Ngoi	WJ701296	6151-III	210403N 1054030E	Ha Tay
6 ●	Chau Phan	WJ681396	6151-III	210931N 1053918E	Vinh Phuc
7 ●	Chuc Tay (See P. E-30)	XJ185464	6251-III	211258N 1060833E	Ha Bac
8 ●	Cua Ngoi, North	XJ238517	6251-IV	211555N 1061136E	Ha Bac
9 ●	Cua Ngoi, South	XJ236516	6251-IV	211553N 1061134E	Ha Bac
10 ●	Dong Cuong	WJ596514	6151-IV	211554N 1053428E	Vinh Phuc
11 ●	Dong Loan	XJ322477	6251-II	211337N 1061621E	Ha Bac
12 ●	Dong Ngac (1)	WJ804318	6151-II	210512N 1054627E	Ha Noi
13 ●	Dong Quan Ben	XJ474229	6251-II	210009N 1062508E	Hai Duong
14 ●	Duc Tu	WJ932346	6151-II	210639N 1055352E	Ha Bac
15 ●	Duong Mong	XJ057357	6251-III	210713N 1060104E	Ha Bac
16 ●	Giang Thou (3)	XJ295489	6251-III	211440N 1061440E	Ha Bac
17 ●	Giang Thou (1)	XJ285498	6251-III	211447N 1061421E	Ha Bac
18 ●	Giang Thou (2)	XJ291496	6251-III	211440N 1061441E	Ila Bac
19 ●	Gai Son	XJ131462	6251-III	211257N 1065134E	Ila Bac
20 ●	Gia Thuong	WJ913296	6251-II	210403N 1055246E	Ha Bac
21 ●	Hanh Canh	WJ905581	6251-II	211928N 1055221E	Vinh Phuc
22 ●	Hanoi/Thuong Cai	WJ917298	6151-II	210406N 1055202E	Ha Bac
23 ●	Hat Mon Trai	WJ636365	6151-III	210750N 1053643E	Ha Tay
24 ●	Hien Luong	WJ263390	6251-III	210903N 1061257E	Ha Bac
25 ●	Huu Nghi	XJ123465	6251-III	211306N 1060454E	Ha Bac
26 ●	Huu Loc	XJ403336	6251-III	210558N 1062105E	Hai Duong
27 ●	Khac Niem Thung	XJ114396	6251-III	210920N 1060425E	Ha Bac
28 ●	Le Xuyen	XJ004369	6151-II	210758N 1055807E	Ha Bac
29 ●	Locha North	WJ921328	6151-IV	210543N 1055314E	Hung Yen
30 ●	Locha South	WJ921328	6151-II	210540N 1055316E	Hai Phong
31 ●	Na Cheim	WJ996861	6152-II	213433N 1055745E	Bai Thai
32 ●	Nan Tri, East	WJ840397	6151-II	210931N 1054834E	Vinh Phuc
33 ●	Nan Tri, West	WJ833396	6151-II	210926N 1054806E	Vinh Phuc
34 ●	Nghai Thon	WJ596282	6151-III	210321N 1053429E	Ha Bac
35 ●	Nghia La	WJ877364	6151-II	210740N 1055046E	Vinh Phuc
36 ●	Ngoc Bai	WJ619228	6151-III	211021N 1053548E	Ha Bac
37 ●	Nguyen Khe East	WJ883417	6151-II	211036N 1055106E	Ha Noi

IRRIGATION/PUMPING STATIONS  
 JOG (G) NF 48-11 (Continued)

MAP KEY	INSTALLATION NAME	UTM COORDINATES	MAP SHEET	GEOGRAPHIC COORDINATES	PROVINCE
38	● Nguyen Khe West	WJ883417	6151-II	211033N 1055104E	Ha Noi
39	● Nhat Tan	WJ857306	6151-II	210434N 1054433E	Ha Noi
40	● Nhat Trai	XJ333235	6251-II	210036N 1061655E	Ia Bac
41	● Nhuong Thon	XJ309474	6251-II	211330N 1061542E	Ha Bac
42	● Nhu Thiet	XJ178527	6251-IV	211626N 1060813E	Ha Bac
43	● Ninh Bac	WJ815478	6151-II	211355N 1054709E	Vinh Phuc
44	● Nong Vu Dong, North	WJ978263	6151-II	210211N 1055636E	Ha Noi
45	● Nong Vu Dong, South	WJ980260	6151-II	210209N 1055634E	Ha Noi
46	● Pha Lai	XJ347354	6251-II	210702N 1061752E	Ha Bac
47	● Phuong Bang	WJ724241	6151-III	210104N 1054150E	Ha Tay
48	● Phuong Trach	WJ849351	6151-II	210657N 1054905E	Vinh Phuc
49	● Phu Sa	WJ536389	6151-III	210910N 1053059E	Ha Tay
50	● Phu Tai	XJ059507	6251-IV	211524N 1060116E	Ia Bac
51	● Phu Xa Doai (See P. E-32)	WJ845433	6151-II	211111N 1054811E	Vinh Phuc
52	● Quan Son	XJ367228	6251-II	210012N 1061855E	Hai Duong
53	● Song Day Dam	WJ676310	6151-III	210454N 1053804E	Ha Tay
54	● Song Gian	WJ511282	6051-II	210320N 1052932E	Ha Tay
55	● Tam Son	WJ466379	6051-II	210837N 1052656E	Ha Tay
56	● Thach Loi	WJ803457	6151-II	211249N 1054621E	Vinh Phuc
57	● Thach Thon	XJ311403	6251-II	210941N 1061548E	Ha Bac
58	● Thai Nguyen	WJ848899	6152-II	213626N 1054909E	Bac Thai
59	● Thai Nguyen/Lang Danh	WJ847894	6152-II	213626N 1054904E	Bac Thai
60	● Thap Duong	XJ347269	6251-II	210219N 1061744E	Ha Bac
61	● Thien Huong	WJ682507	6151-IV	211530N 1053941E	Vinh Phuc
62	● Thinh Ky	WJ717503	6151-IV	211518N 1054128E	Vinh Phuc
63	● Thong Thien Ila	XJ170456	6251-III	211237N 1060737E	Ha Bac
64	● Thon Lo	XJ207537	6251-IV	211658N 1060951E	Ia Bac
65	● Thuong Thon (1)	WJ753344	6151-III	210643N 1054333E	Ha Tay
66	● Thuong Thon (2)	WJ962304	6151-II	210439N 1055534E	Ha Bac
67	● Thu Thon	WJ991400	6151-II	210940N 1055720E	Ia Bac
68	● Tien Tan	WJ713358	6151-III	210728N 1054115E	Ha Tay
69	● Tien Tao	WJ953495	6151-II	211445N 1055511E	Vinh Phuc
70	● Trac But	WJ984458	6151-II	211246N 1055655E	Ha Bac
71	● Trai Ma Gang	WJ571334	6151-III	210608N 1053302E	Ia Tay
72	● Trung Thon	WJ751338	6151-III	210641N 1054332E	Ha Tay
73	● Trung Thon Sa	XJ410333	6251-II	210553N 1062128E	Ha Bac
74	● Truoc Thon	XJ258506	6251-IV	211515N 1061247E	Ia Bac

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**IRRIGATION/PUMPING STATIONS****JOG (G) NF 48-11(Continued)**

MAP KEY	INSTALLATION NAME	UTM COORDINATES	MAP SHEET	GEOGRAPHIC COORDINATES	PROVINCE
75	● Van Loi	WJ737448	6151-III	211218N 1054238E	Vinh Phuc
76	● Van Thuong North	WJ893338	6151-II	210615N 1055138E	Ha Noi
77	● Van Thuong South	WJ898330	6151-II	210608N 1055153E	Vinh Phuc
78	● Vinh Phu	WJ559654	6151-IV	212330N 1053223E	Vinh Phuc
79	● Vu Xa	XJ542282	6251-II	210300N 1062905E	Ha Duong
80	● Vu Gian	XJ267487	6251-III	211410N 1061315E	Ha Bac
81	● Xom Nam	WJ984716	6151-II	212643N 1055657E	Bac Thai
82	● Xuan Duong (See P. E-27)	WJ923449	6151-II	211216N 1055325E	Vinh Phuc
83	● Xuan Tao	WJ945484	6151-II	211411N 1055439E	Vinh Phuc
84	● Xuan Trach	WJ894303	6151-II	210420N 1055139E	Vinh Phuc
85	● Yen Dien	XJ460233	6251-II	210021N 1062420E	Hai Duong
86	● Yen Khe	XJ230514	6251-IV	211542N 1061112E	Ha Bac
87	● Yen Tap Cao	XJ248427	6251-II	211058N 1061208E	Ha Bac
88	● Trinh Xa	WJ361523	6051-IV	211625N 1052053E	Phu Tho
89	● Nguyet Cau	WJ970470	6151-II	211326N 1055608E	Ha Bac
90	● Phuc Man	XJ245568	6251-IV	211839N 1061205E	Ha Bac
91	● Xom Sang	WJ134361	6051-III	210739N 1050741E	Phu Tho
92	● Phu My	XJ083299	6251-III	210410N 1060238E	Ha Bac
93	▲ Tam Son	WJ466379	6051-II	210837N 1052656E	Son Tay
94	▲ Vinh Phu	WJ559654	6151-IV	212330N 1053223E	Vinh Phuc
95	▲ Xom Viet (See P. E-38)	WJ470548	6051-I	211743N 1052714E	Vinh Phuc
96	▲ Kep (See P. E-41)	XJ381712	6251-I	212621N 1061958E	Ha Bac
97	▲ Dong Ngac (2)	XJ804319	6151-II	210516N 1054628E	Ha Noi
98	▲ Tang My (See P. E-40)	WJ833404	6151-II	210951N 1054810E	Vinh Phuc
99	▲ Vong La	WJ813336	6151-II	210602N 1054700E	Vinh Phuc
100	▲ Nguyen Xa (See P. E-36)	WJ972354	6151-II	210709N 1055611E	Ha Bac

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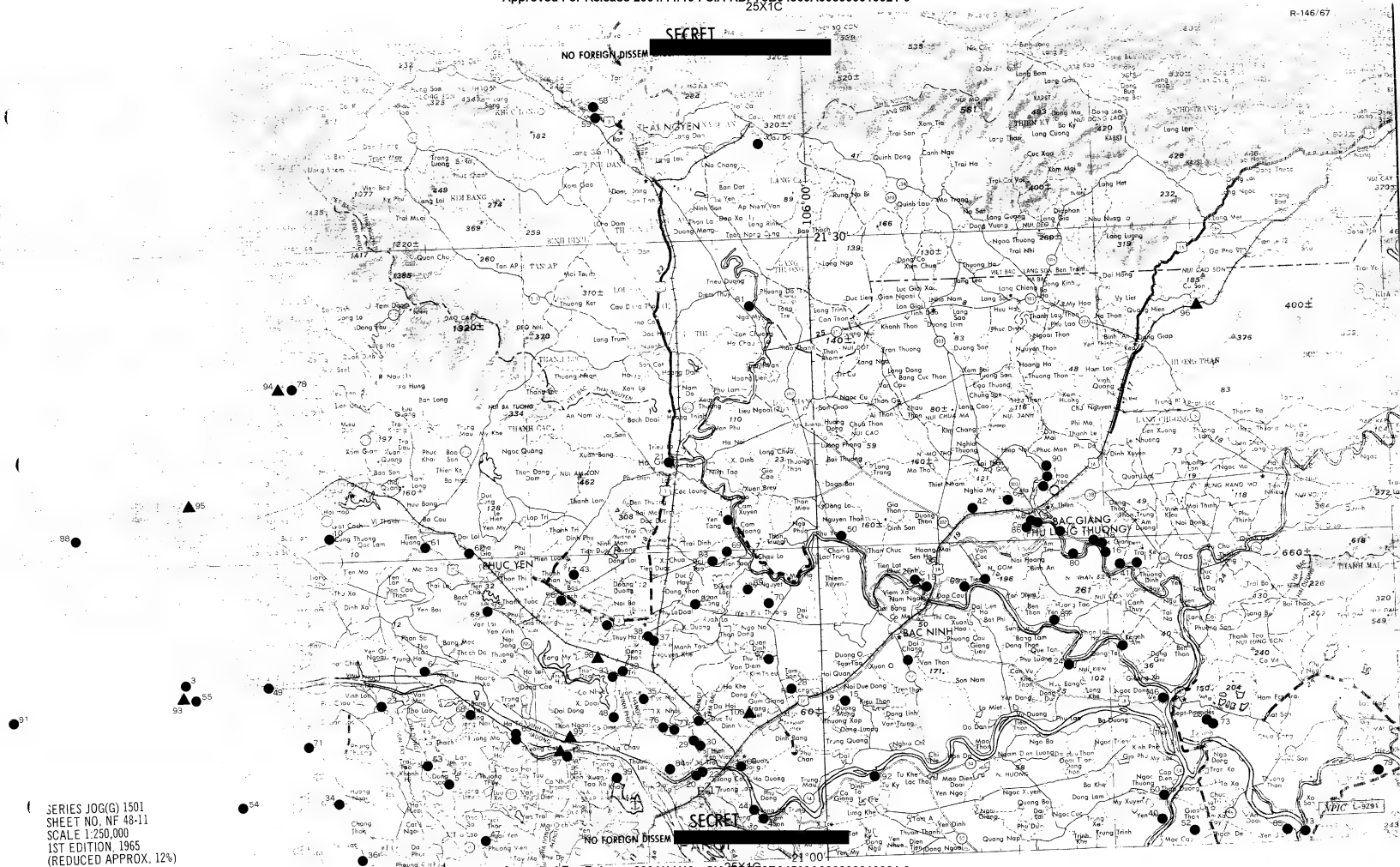
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## IRRIGATION/PUMPING STATIONS

JOG (G) NF 48-16

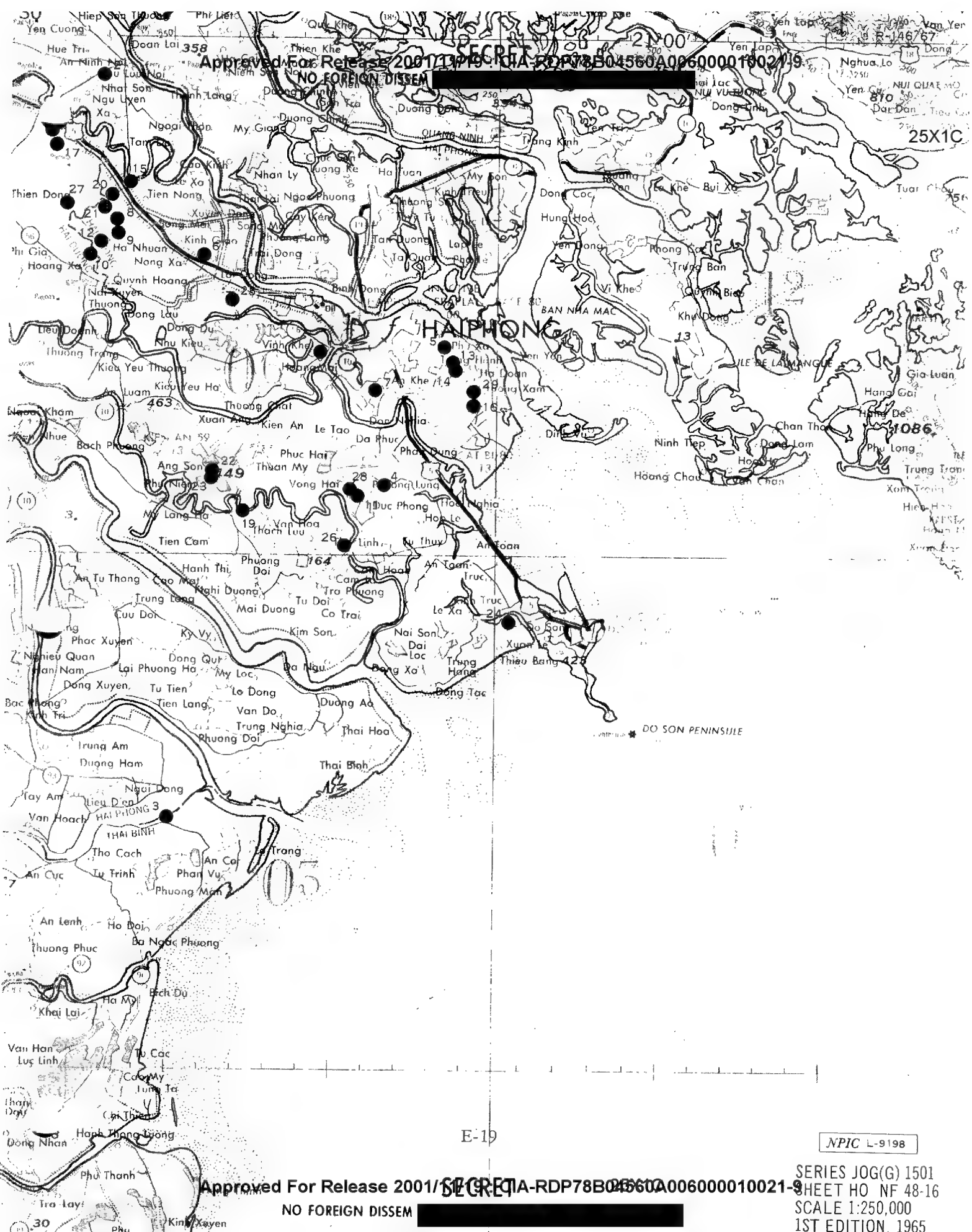
MAP KEY	INSTALLATION NAME	UTM COORDINATES	MAP SHEET	GEOGRAPHIC COORDINATES	PROVINCE
1 ●	An Duong	XJ728063	6350-IV	205056N 1063945E	Hai Phong
2 ●	An Lang	XJ599202	6350-IV	205839N 1063219E	Hai Duong
3 ●	Co Am	XI1647807	6350-III	203715N 1063453E	Thai Binh
4 ●	Dia Tra	XH766993	6350-IV	204715N 1064149E	Hai Phong
5 ●	Doan Xa	XJ789068	6350-IV	205118N 1064313E	Hai Phong
6 ●	Do Nha	XJ665107	6350-IV	205330N 1063605E	Hai Phong
7 ●	Don Nghia	XJ750042	6350-IV	204955N 1064054E	Hai Phong
8 ●	Du Ngia, North	XJ624126	6350-IV	205436N 1063348E	Hai Phong
9 ●	Du Nghia, South	XJ624123	6350-IV	205433N 1063348E	Hai Phong
10 ●	Duong Phu	XJ603113	6350-IV	205350N 1063230E	Hai Duong
11 ●	Anh Lang	XJ745990	6350-II	204703N 1064047E	Hai Phong
12 ●	Ha Nhuan	XJ606116	6350-IV	205357N 1063241E	Hai Phong
13 ●	Kieu Son (1)	XJ784054	6350-IV	205038N 1064353E	Hai Phong
14 ●	Kieu Son (2)	XJ783055	6350-IV	205032N 1064328E	Hai Phong
15 ●	Kim Son	XJ621149	6350-IV	205545N 1063332E	Hai Phong
16 ●	Luong Xam	XJ809039	6350-IV	204951N 1064422E	Hai Phong
17 ●	Luong Xa, South	XJ583174	6350-IV	205707N 1063117E	Hai Duong
18 ●	Luong Xa, North	XJ585177	6350-IV	205717N 1063122E	Hai Duong
19 ●	Nguyen Ang	XH683976	6350-IV	204619N 1063700E	Hai Phong
20 ●	Phi Xa, North	XJ611141	6350-IV	205519N 1063255E	Hai Phong
21 ●	Phi Xa, South	XJ610139	6350-IV	205512N 1063256E	Hai Phong
22 ●	Phu Niem, South	XI1670995	6350-IV	204716N 1063620E	Hai Phong
23 ●	Phu Niem, North	XI1670997	6350-IV	204723N 1063619E	Hai Phong
24 ●	Phu Noi	XH838928	6350-II	204338N 1064546E	Hai Phong
25 ●	Quynh Hoang	XJ674087	6350-IV	205226N 1063636E	Hai Phong
26 ●	Tho Linh	XI1735956	6350-IV	204514N 1064004E	Hai Phong
27 ●	Vien Chu	XJ587138	6350-IV	205512N 1063133E	Hai Duong
28 ●	Vong Hai	XI1744991	6350-IV	204705N 1064039E	Hai Phong
29 ●	Xam Bo	XJ809044	6350-IV	204957N 1064419E	Hai Phong

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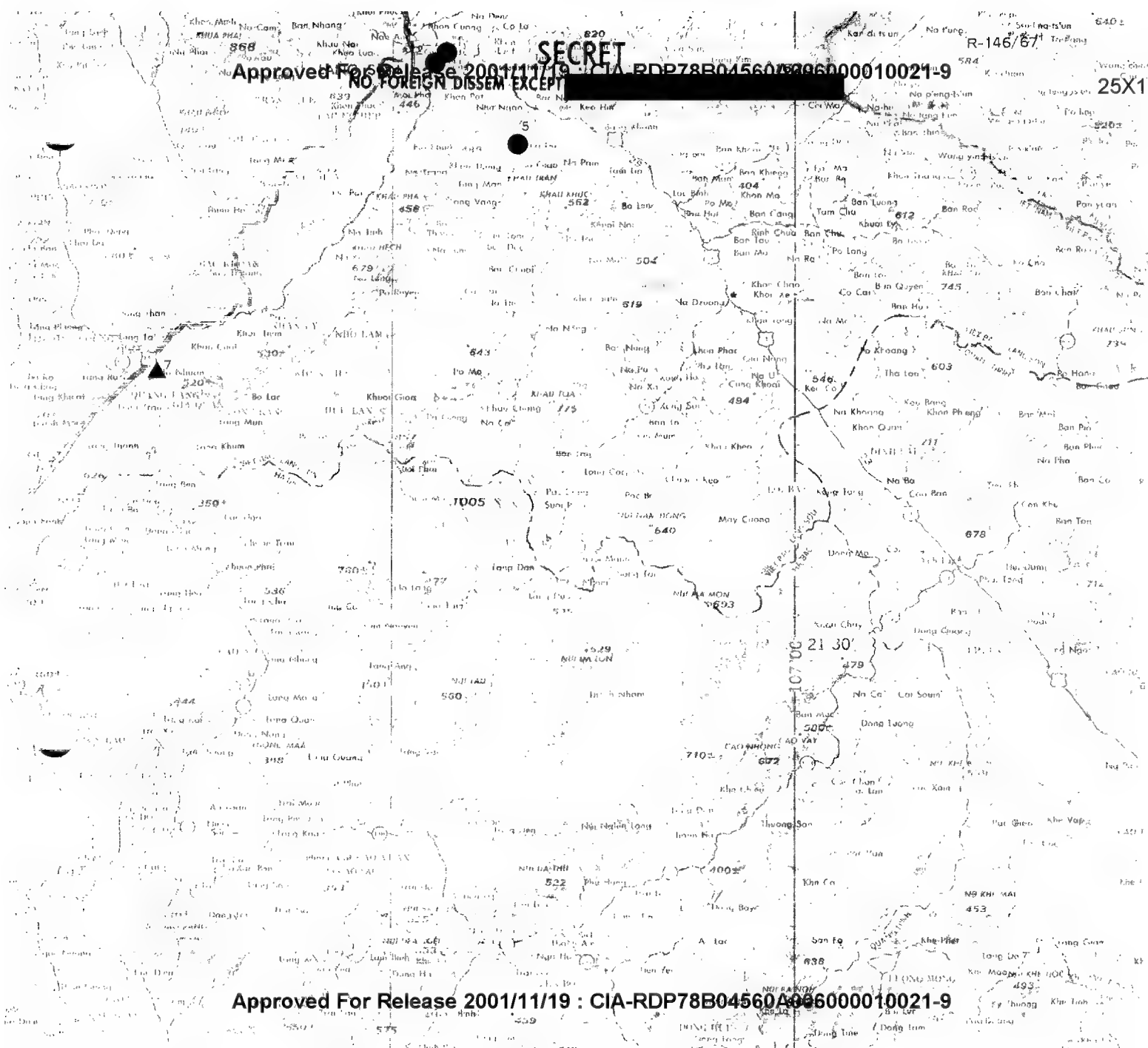
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SERIES JOG(G) 1501  
SHEET HO NF 48-16  
SCALE 1:250,000  
1ST EDITION, 1965

IRRIGATION/PUMPING STATIONS  
JOG (G) NF 48-12

MAP KEY	INSTALLATION NAME	UTM COORDINATES	MAP SHEET	GEOGRAPHIC COORDINATES	PROVINCE
1 ●	Phia Deo	XK837168	6352-1	215050N 1064647E	Ha Tay
2 ●	Pho Mo	XK833163	6352-1	215035N 1064625E	Lang Son
3 ●	Uong Bi	XJ858262	6351-II	210145N 1064720E	Quang Ninh
4 ●	Vang Danh (1) (See P. E-3)	XJ873375	6351-II	210752N 1064815E	Quang Ninh
5 ●	Nhu Ngao	XK897133	6352-I	214854N 1065011E	Lang Son
6 ▲	Vang Danh (2)	XJ865319	6351-II	210450N 1064745E	Quang Ninh
7 ▲	Khon Cuoi	XJ666977	6352-II	214033N 1063635E	Lang Son

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# **IRRIGATION/PUMPING STATIONS** **JOG (G) NF 48-7**

MAP KEY	INSTALLATION NAME	UTM COORDINATES	MAP SHEET	GEOGRAPHIC COORDINATES	PROVINCE
1 ●	Na Cap	XL279079	6254-III	214030N 1061440E	Bac Phan
2 ●	Ban Lo	XL268095	6254-III	224121N 1061410E	Bac Phan
3 ●	Ha Quang, East	XL163164	6254-IV	224510N 1060759E	Bac Phan
4 ●	Ha Quang, West	XL162162	6254-IV	224505N 1060755E	Bac Phan
5 ●	Na Tanh	XL239082	6254-III	224040N 1061225E	Bac Phan
6 ●	Na Vai	XL238083	6254-III	224045N 1061221E	Bac Phan
7 ▲	An Ninh	XL160162	6254-IV	224505N 1060748E	Bac Phan



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IRRIGATIONS/PUMPING STATIONS  
 JOG (G) NE 48-3

MAP KEY	INSTALLATION NAME	UTM COORDINATES	MAP SHEET	GEOGRAPHIC COORDINATES	PROVINCE
1 ●	Bai Ha Xuan	WG947996	6148-I	195328N 1055419E	Thanh Hoa
2 ●	Cham Khe	WG666663	6148-II	193532N 1053813E	Thanh Hoa
3 ●	Dai Duc	WG743775	6148-III	194132N 1054235E	Thanh Hoa
4 ●	Khang Nghe	WH787070	6148-I	195740N 1054512E	Thanh Hoa
5 ●	Kieu Thon	WG785593	6148-III	193140N 1054454E	Thanh Hoa
6 ●	Ny Hao	WG630970	6148-IV	195210N 1053609E	Thanh Hoa
7 ●	Thach That, East	WG775831	6148-III	194435N 1054422E	Thanh Hoa
8 ●	Thach That, West	WG773830	6148-II	194434N 1054418E	Thanh Hoa
9 ▲	Dai Dien (See P. E-42)	WH807038	6148-I	195549N 1054617E	Thanh Hoa
10 ▲	Ngoc Quang	WH614065	6148-IV	195720N 1053518E	Thanh Hoa

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NO FOREIGN DISSEM

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NO FOREIGN DISSEM



NPIC L-9199

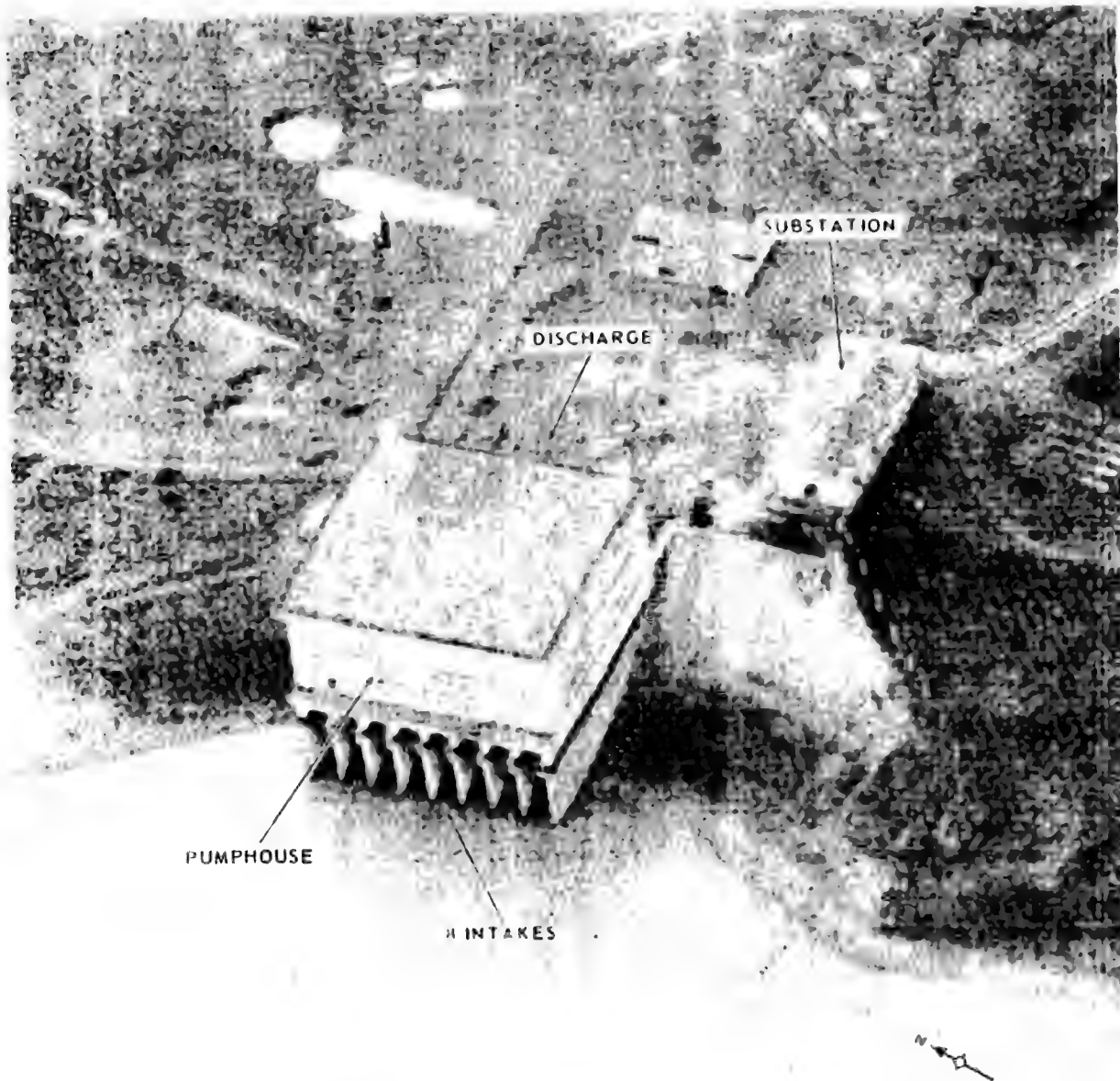
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NO FOREIGN DISSEM

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SHEET NO. NE 48-3  
SCALE 1:250,000  
1ST EDITION, 1965

XJ246565  
UTM COORDINATES

BAC GIANG PUMPING STATION, NORTH

21-18-28N 106-12-04E  
GEOGRAPHIC COORDINATES



25X1D

APIC L 918C

WJ923449  
UTM COORDINATES

XUAN DUONG IRRIGATION STATION

21-12-16N 105-53-25E  
GEOGRAPHIC COORDINATES



25X1D

E-27

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25X1C

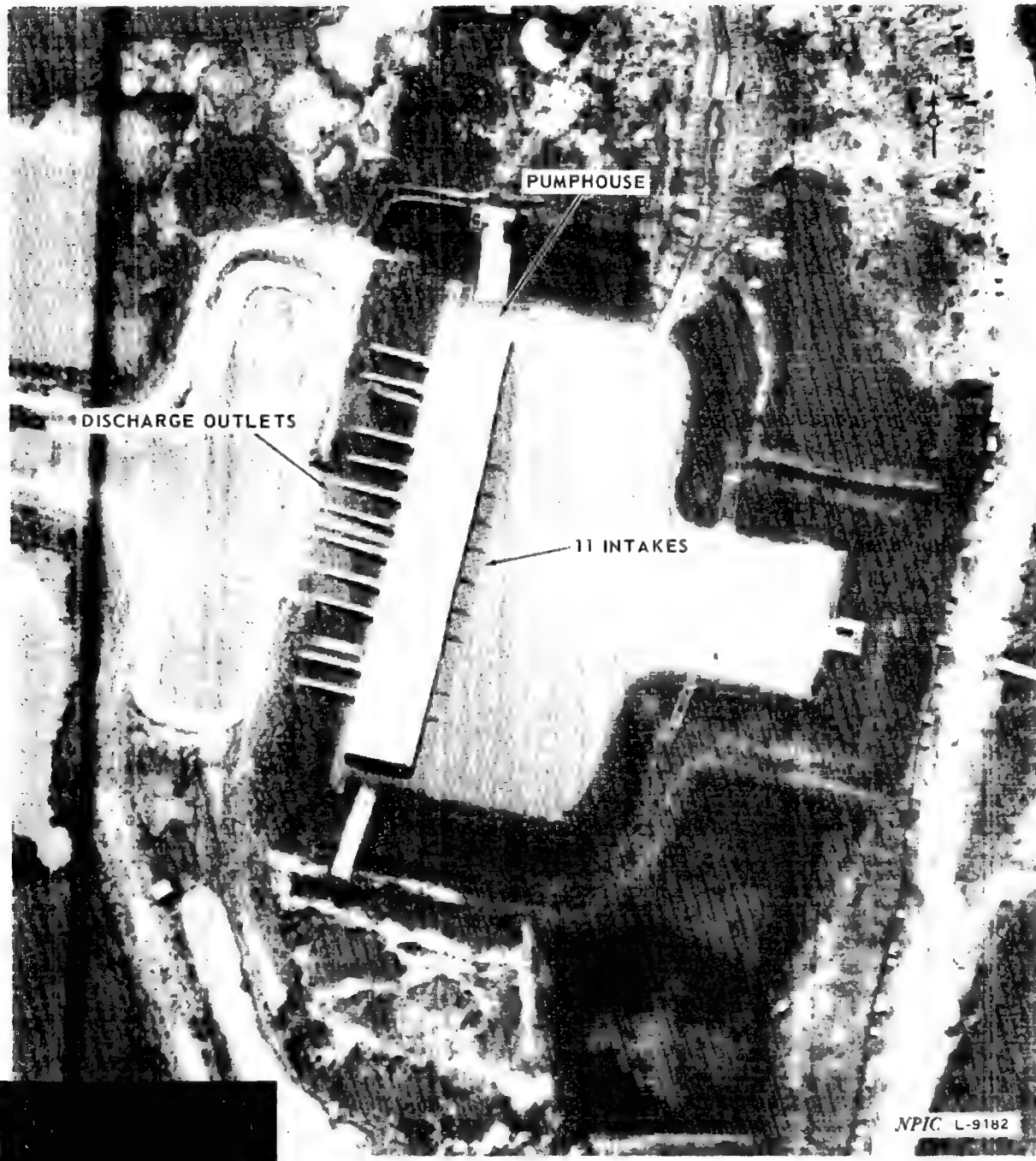
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LUONG SON IRRIGATION STATION

WJ649141  
UTM COORDINATES

20-55-39N 105-37-23E  
GEOGRAPHIC COORDINATES



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NPIC L-9182

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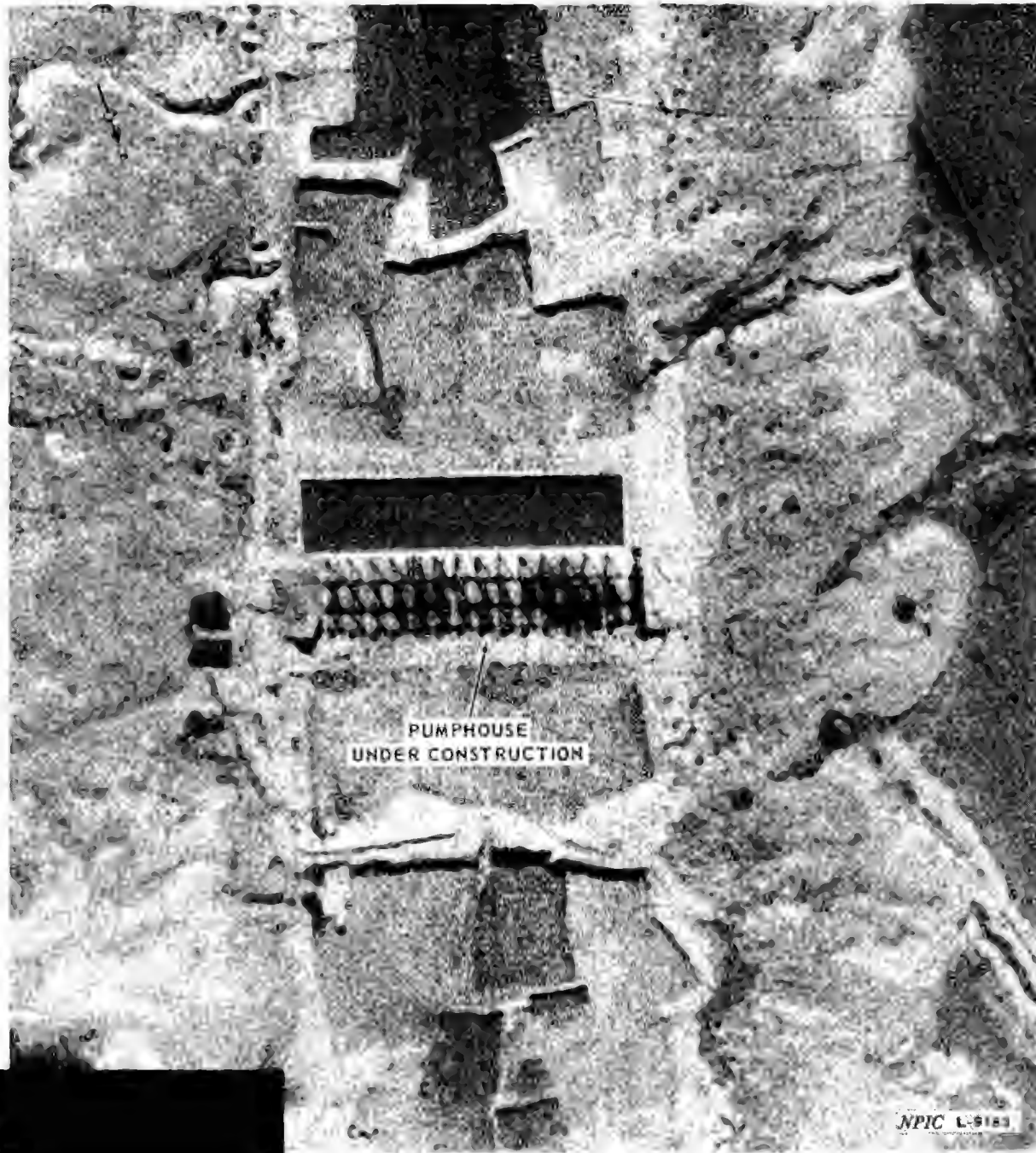
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WF802414  
UTM COORDINATES

DONG MY IRRIGATION STATION U/C

18-27-47N 105-45-36E  
GEOGRAPHIC COORDINATES



25X1D

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CHUC TAY IRRIGATION STATION

XJ185464  
UTM COORDINATES

21-12-58N 106-08-33E  
GEOGRAPHIC COORDINATES



25X1D

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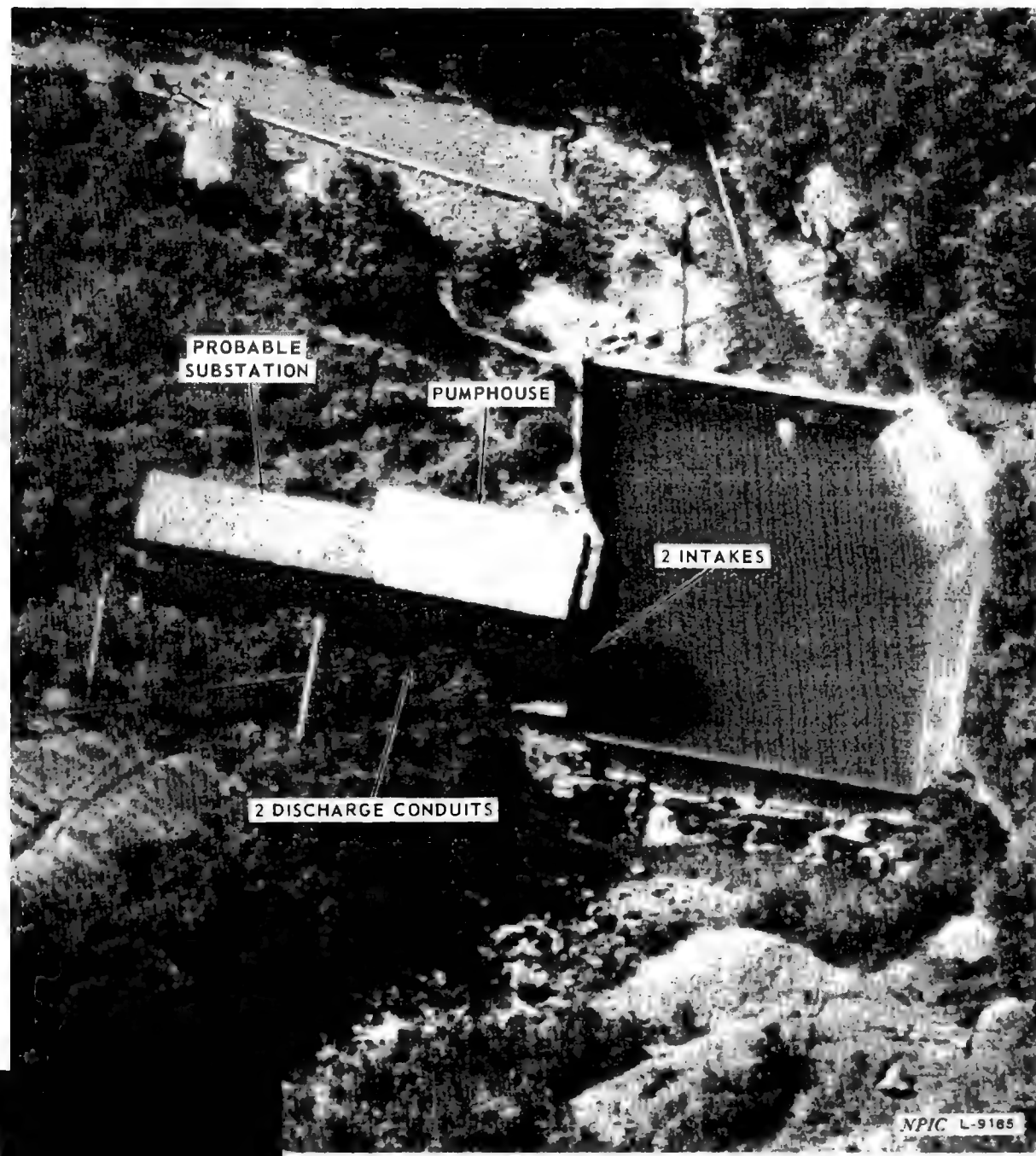
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VANG DANH PUMPING STATION

XJ873375  
UTM COORDINATES

21-07-52N 106-48-15E  
GEOGRAPHIC COORDINATES



25X1D

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25X1C

NO FOREIGN DISSEM

PHU XA DOAI IRRIGATION STATION

WJ845433  
UTM COORDINATES

21-11-11N 105-48-11E  
GEOGRAPHIC COORDINATES



25X1D

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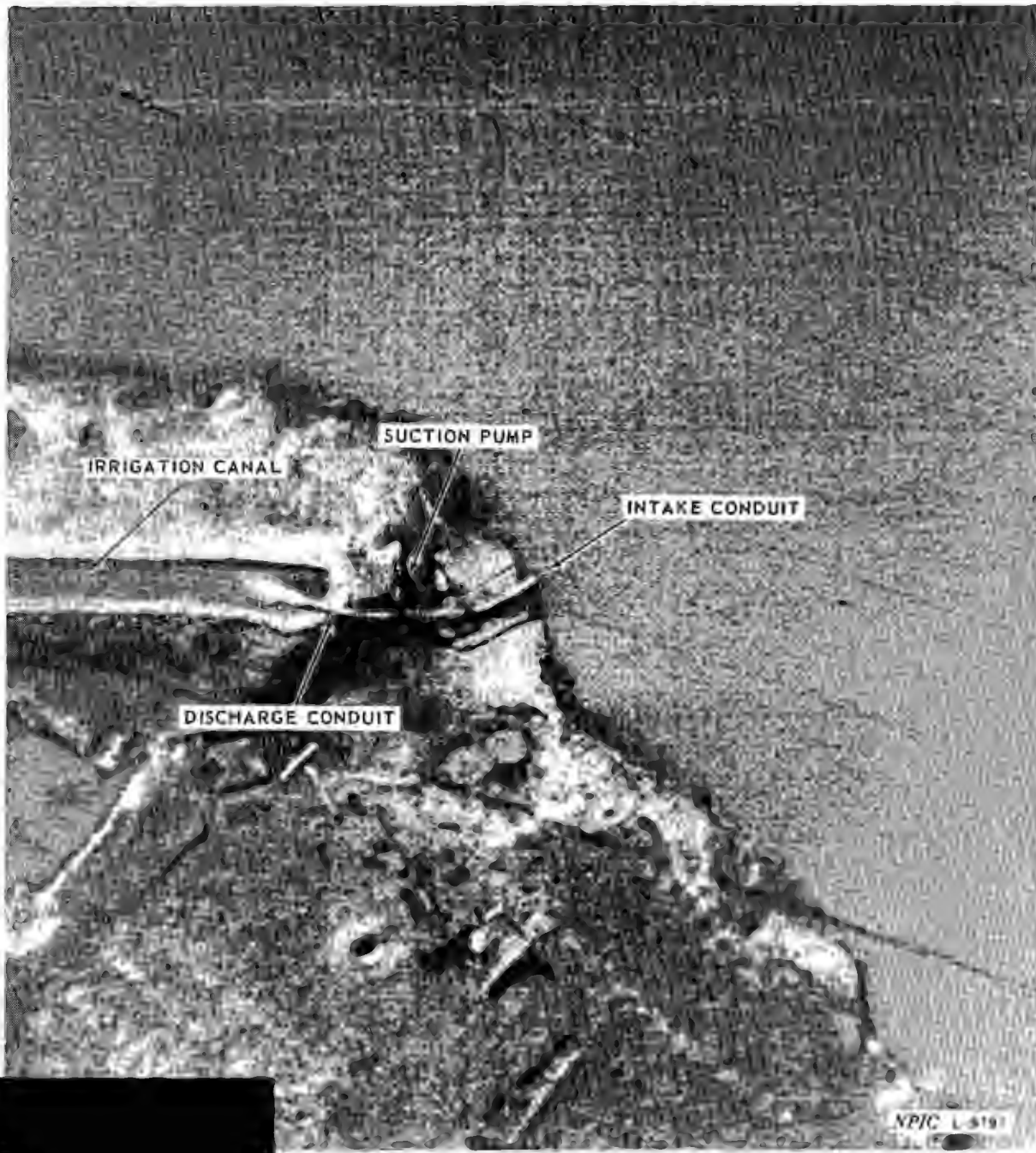


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25X1C

SIMPLE IRRIGATION STATION, HA NOI AREA  
WJ945305  
UTM COORDINATES

21-04-30N 105-54-36E  
GEOGRAPHIC COORDINATES



25X1D [REDACTED]

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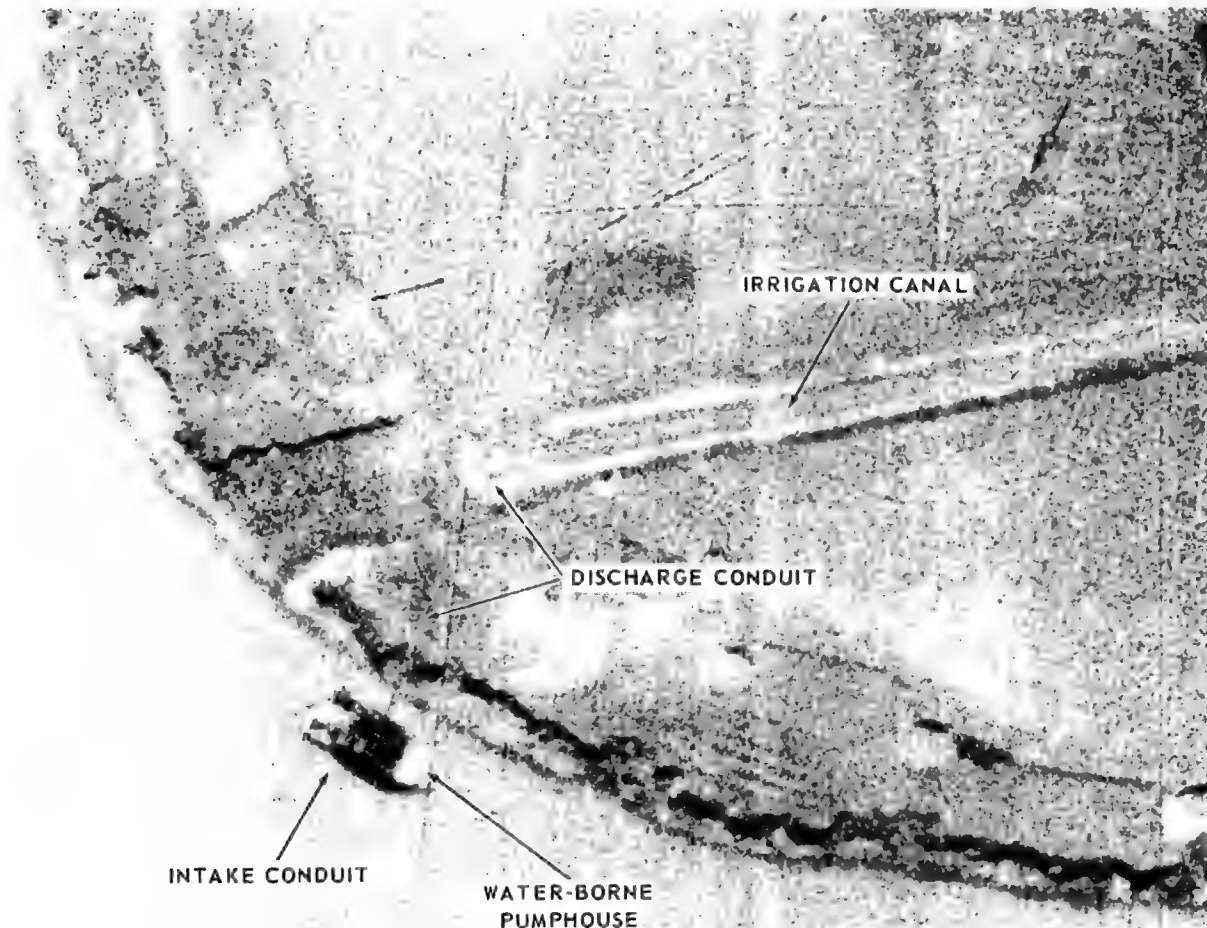
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XJ611036  
UTM COORDINATES

WATER-BORNE IRRIGATION STATION, HAI PHONG AREA

20-49-36N 106-32-53E  
GEOGRAPHIC COORDINATES



25X1D

NPIC L 9192

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25X1C



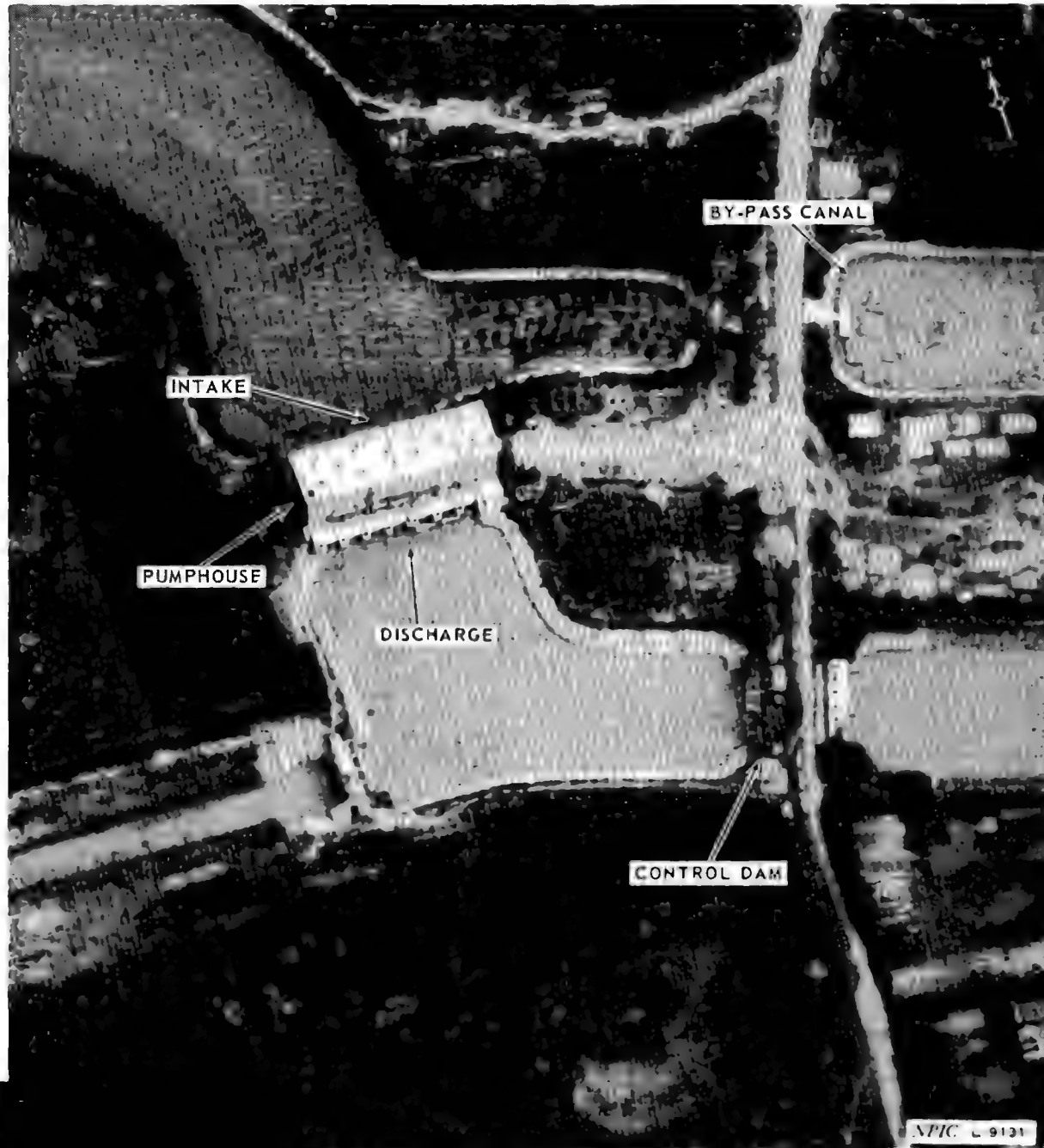
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TIEU COC IRRIGATION STATION (UNCONFIRMED)

XH207536  
UTM COORDINATES

20-22-42N 106-09-25E  
GEOGRAPHIC COORDINATES



25X1D

E-35

NO FOREIGN DISSEM

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NO FOREIGN DISSEM

NGUYEN XA IRRIGATION STATION (UNCONFIRMED)

WJ972354  
UTM COORDINATES

21-07-09N 105-56-11E  
GEOGRAPHIC COORDINATES



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NPIC L-9150

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NO FOREIGN DISSEM

NO FOREIGN DISSEM

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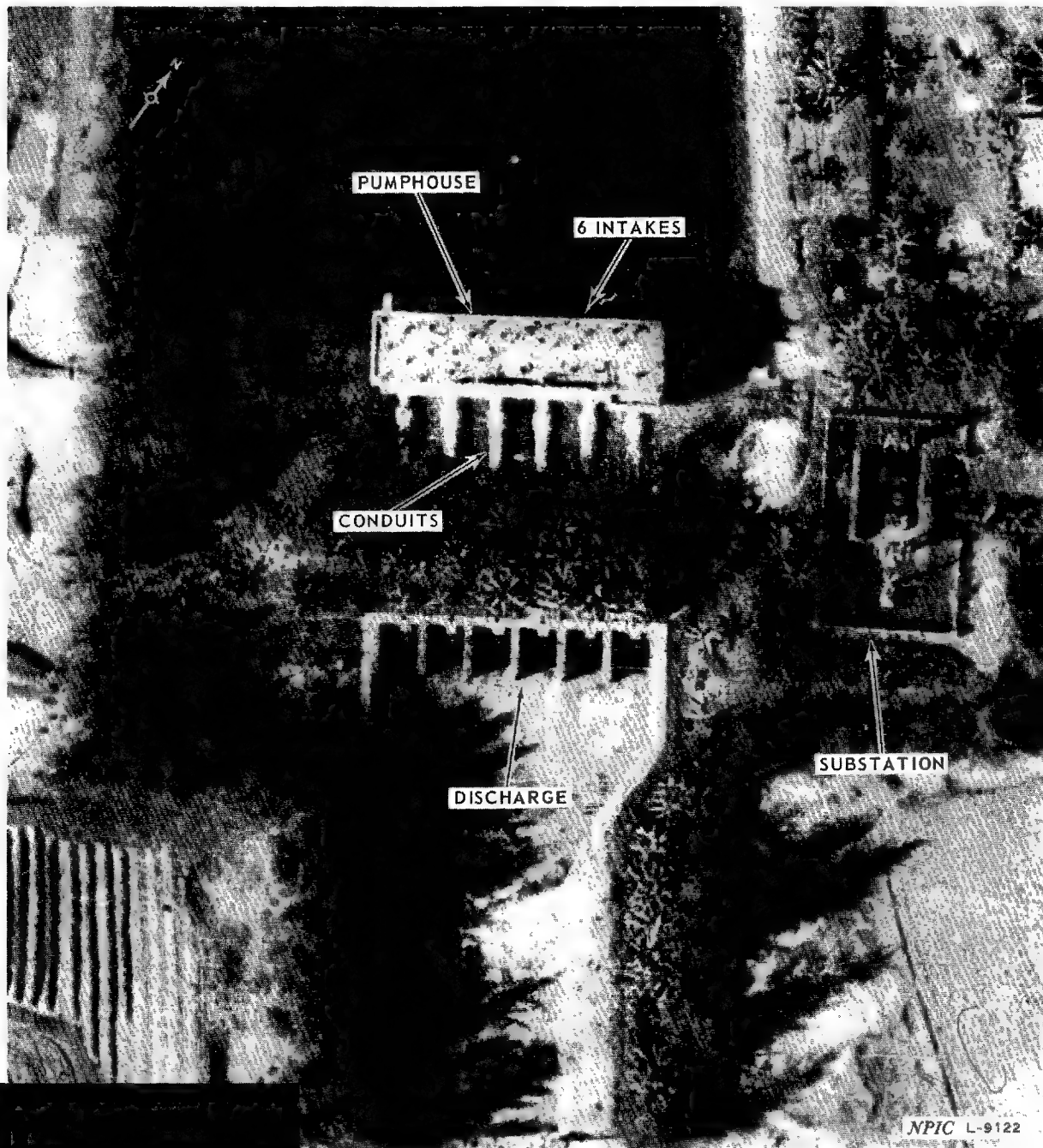
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LA KHE TAY IRRIGATION STATION (UNCONFIRMED)

WJ784186  
UTM COORDINATES

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25X1D

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25X1C

NO FOREIGN DISSEM

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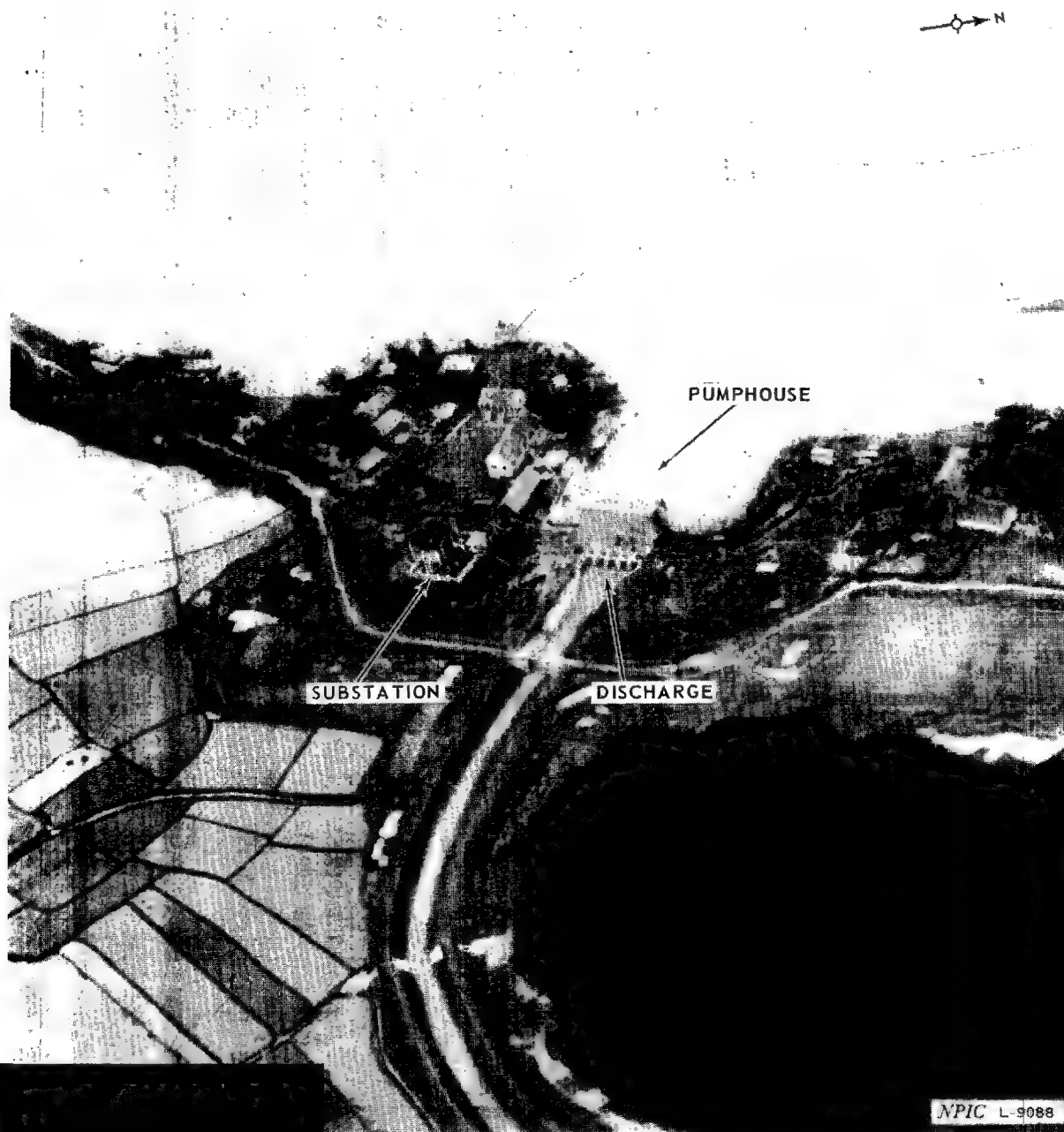
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XOM VIET IRRIGATION STATION (UNCONFIRMED)

WJ470548  
UTM COORDINATES

21-17-43N 105-27-14E  
GEOGRAPHIC COORDINATES



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NO FOREIGN DISSEM

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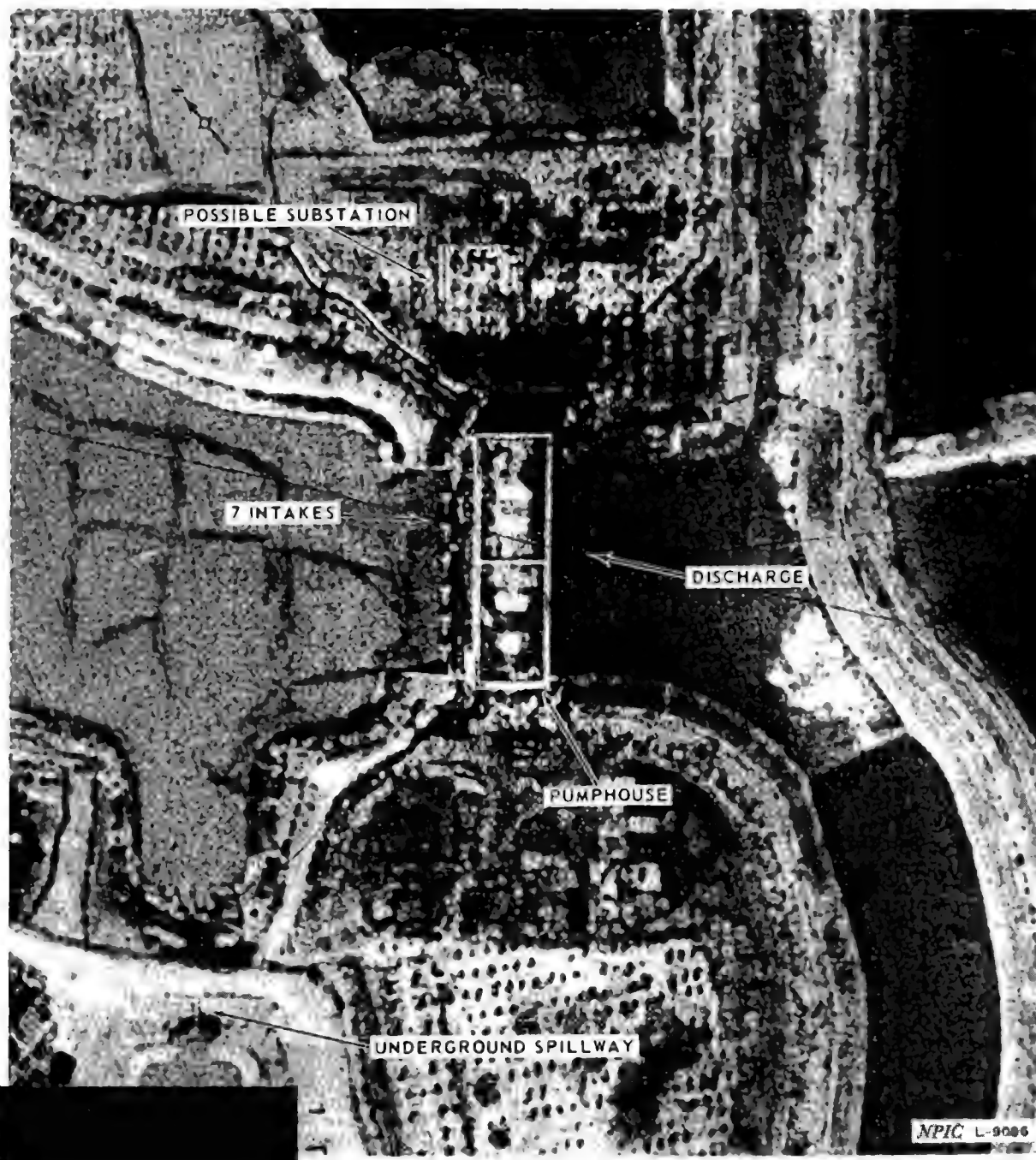


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TRAM PHUONG IRRIGATION STATION (UNCONFIRMED)  
WH999508  
UTM COORDINATES

20-21-16N 105-57-27E  
GEOGRAPHIC COORDINATES



25X1D

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25X1C

NO FOREIGN DISSEM

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TANG MY IRRIGATION STATION (UNCONFIRMED)

WJ833404  
UTM COORDINATES

21-09-51N 105-48-10E  
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25X1D

NPIC L-9151

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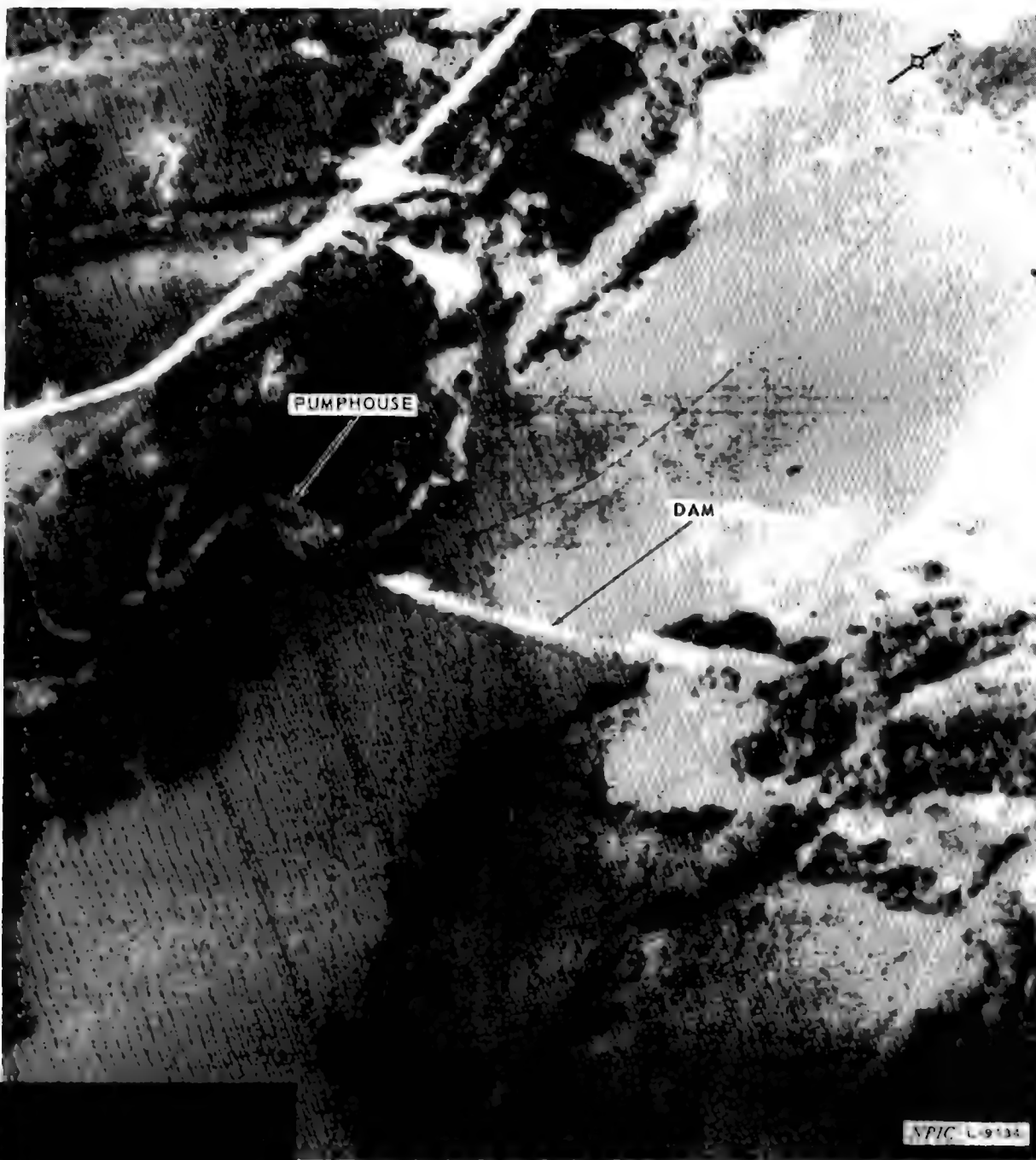
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KEP IRRIGATION STATION (UNCONFIRMED)  
XJ381712  
UTM COORDINATES

21-26-21N 106-19-58E  
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25X1D

E-41

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NO FOREIGN DISSEM

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DAI DIEN IRRIGATION STATION UNDER CONSTRUCTION (UNCONFIRMED)

WH807038  
UTM COORDINATES

19-55-49N 105-46-17E  
GEOGRAPHIC COORDINATES



25X1D

E-42

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NO FOREIGN DISSEM

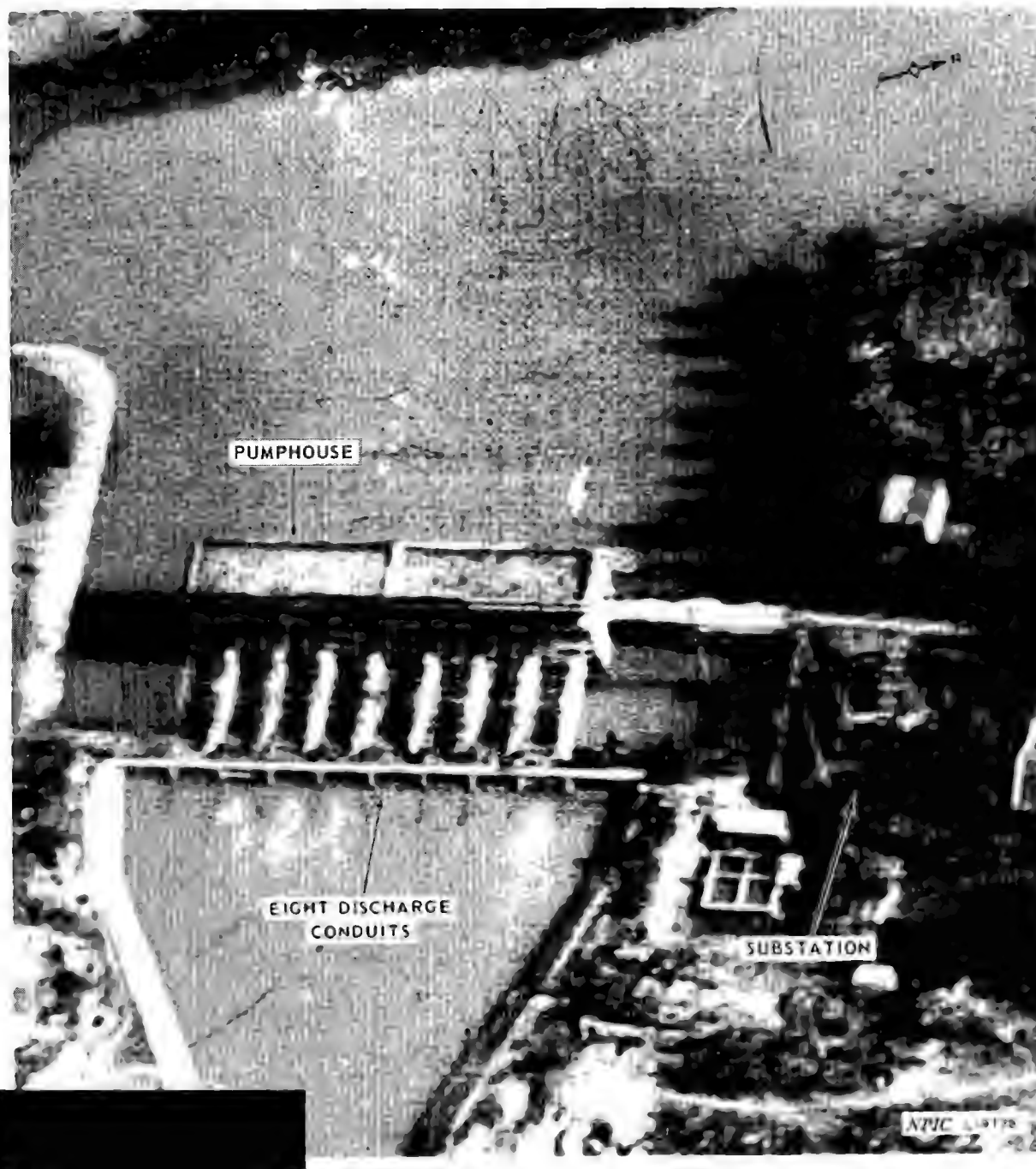
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NGO XUYEN IRRIGATION STATION (UNCONFIRMED)  
XJ023205  
UTM COORDINATES

20-58-11N 105-59-11E  
GEOGRAPHIC COORDINATES



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# SECTION F

## MISCELLANEOUS

F

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PROBABLE MOBILE TRANSFORMER, CAM PHA MINING AREA

UTM COORDINATES

GEOGRAPHIC COORDINATES



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TRANSPORTABLE GENERATORS, CAM PHA AREA

UTM COORDINATES

GEOGRAPHIC COORDINATES



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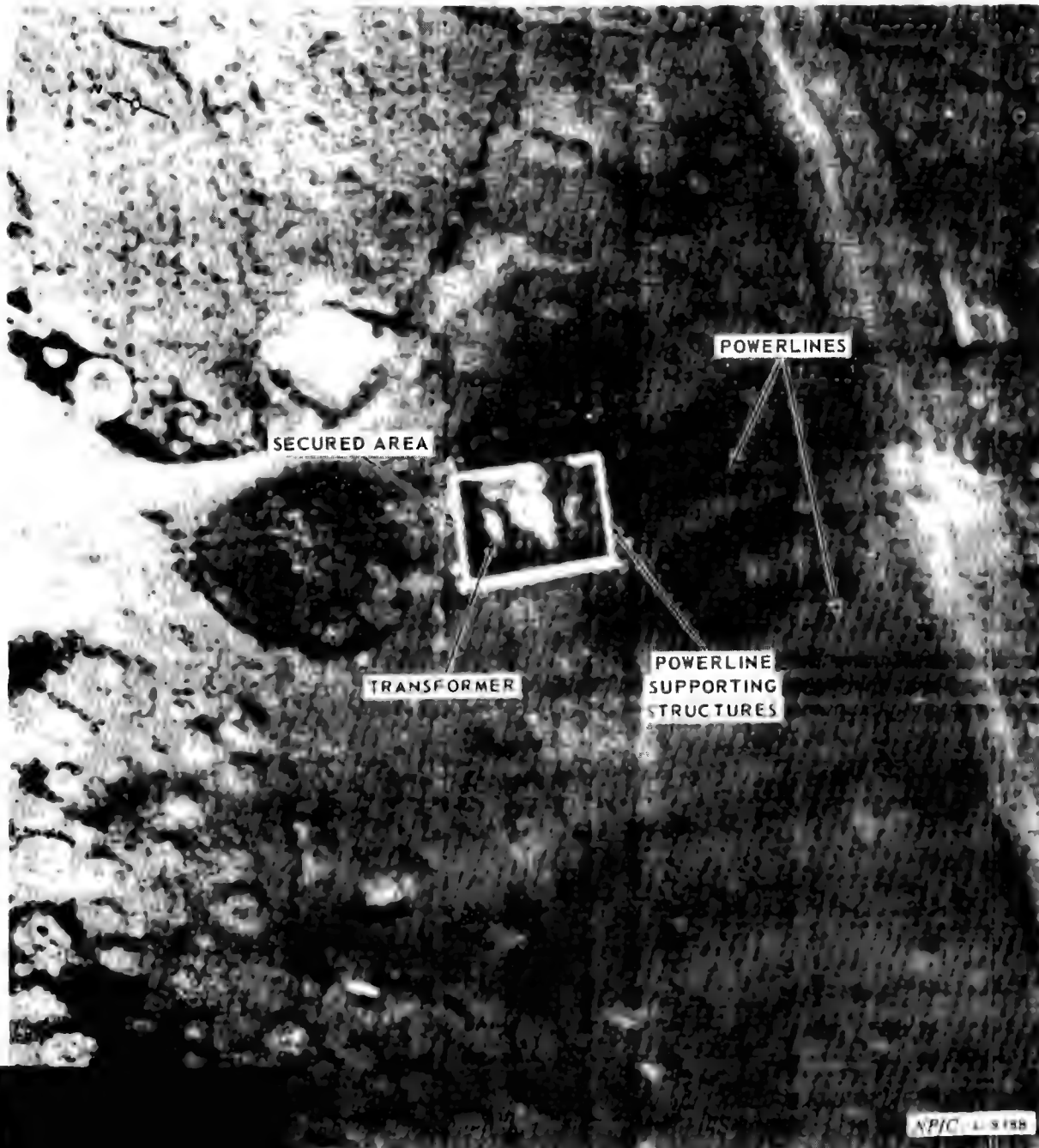
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MINOR SUBSTATION, OPEN-TYPE, HA NOI AREA

UTM COORDINATES

GEOGRAPHIC COORDINATES



25X1D

NPIC 4-3158

F 8

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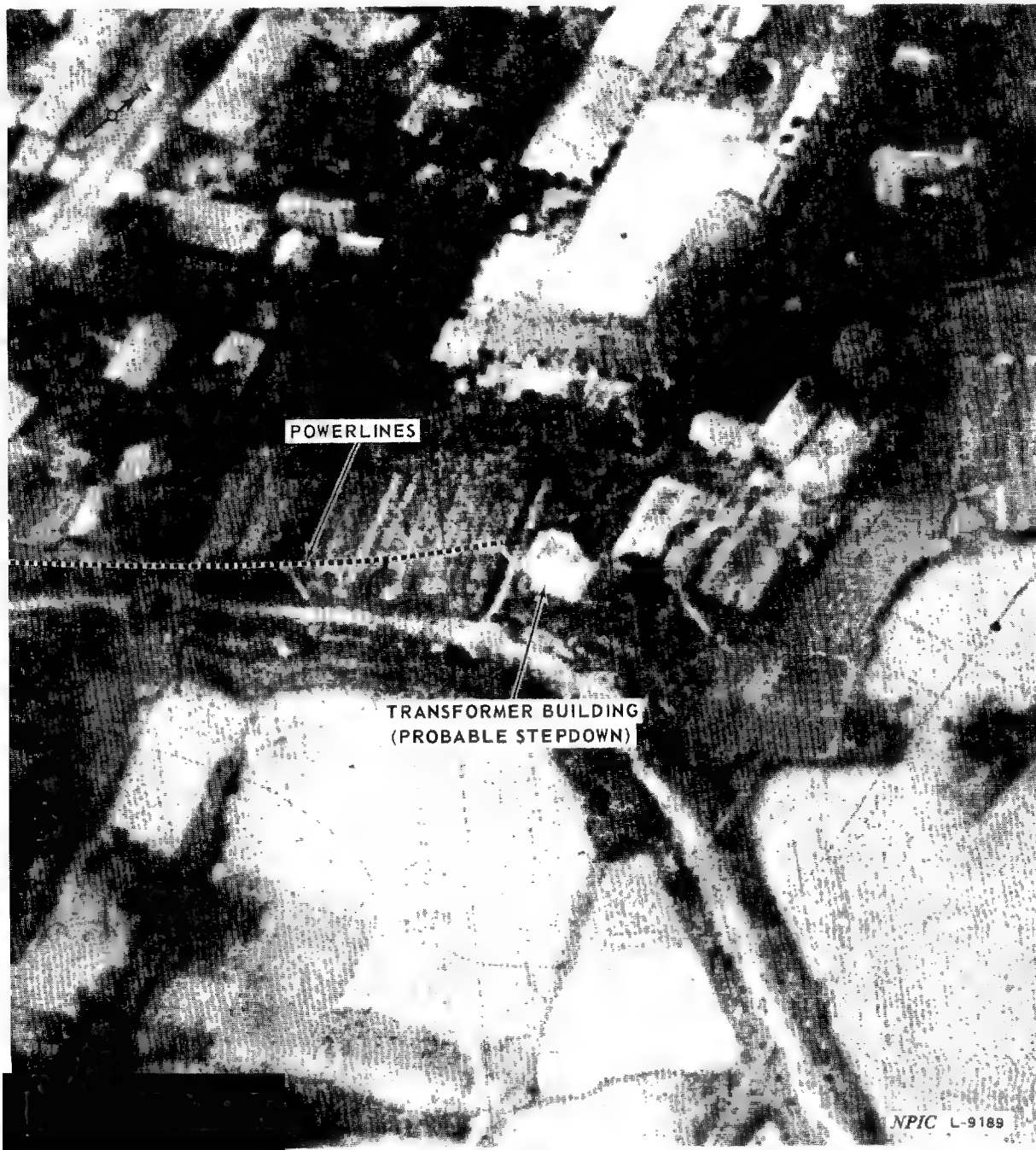
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MINOR SUBSTATION, ENCLOSED-TYPE, THANH HOA AREA

UTM COORDINATES

GEOGRAPHIC COORDINATES



25X1D

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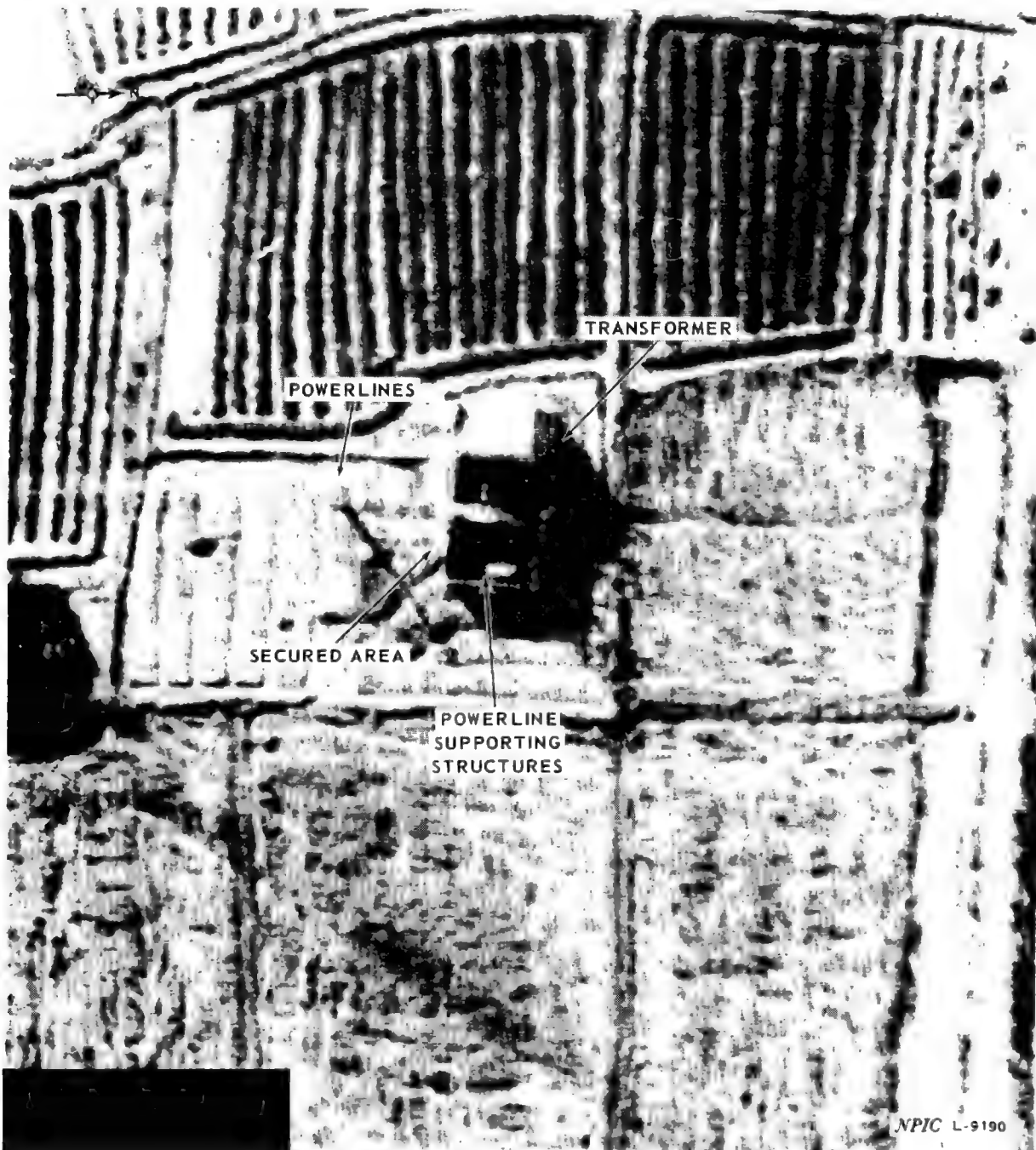
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MINOR SUBSTATION, SEMIENCLOSED-TYPE, HA NOI AREA

UTM COORDINATES

GEOGRAPHIC COORDINATES



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CO DINH THERMAL POWERPLANT  
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VIET YEN I/P STATION	203904N 1061432E E-11
THUONG THON I/P STATION	203955N 1061422E E-11
TUONG PHUONG I/P STATION	203935N 1061745E E-11
LA TRIEU I/P STATION	203930N 1061820E E-10
NINH GIANG TRANSFORMER SUBSTATION VINH BAO	204133N 1062921E D-42
QUANG LE I/P STATION	204258N 1061256E E-10
MY DONG I/P STATION	204225N 1061610E E-10
CUC BU I/P STATION	204247N 1061937E E-9
DO SON TRANSFORMER SUBSTATION	204247N 1064728E D-94
NINH PHUC I/P STATION	204336N 1060109E E-10
TRANH CHU I/P STATION	204338N 1062452E E-11
NINH GIANG TRANSFORMER SUBSTATION, EAST	204343N 1062425E D-82
NINH GIANG TRANSFORMER SUBSTATION, WEST	204346N 1062404E D-84
PHU NOI I/P STATION	204338N 1064546E E-18
CAU XA I/P STATION	204408N 1060534E E-9
QUANG XA I/P STATION	204500N 1061215E E-10
GAU LY I/P STATION	204520N 1061328E E-9
BINH HOANG I/P STATION	204556N 1062005E E-9
THU LINH TRANSFORMER SUBSTATION	204508N 1064040E D-74
THU LINH I/P STATION	204514N 1064004E E-18
HAI DUONG TRANSFORMER SUBSTA DO NGHIA	204652N 1062207E D-58
NGUYEN ANG I/P STATION	204619N 1063700E E-18
CAU DUE I/P STATION	204750N 1061522E E-9
DO XA I/P STATION	204750N 1062052E E-9

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UE TAI I/P STATION	204723N 1062355E E-11
PHU NIEM, SOUTH I/P STATION	204716N 1063620E E-18
PHU NIEM, NORTH I/P STATION	204723N 1063619E E-18
KIEN AN TRANSFORMER SUBSTATION	204754N 1063754E D-50
ANH LANG I/P STATION	204703N 1064047E E-18
VONG HAI I/P STATION	204705N 1064039E E-18
DIA TRA I/P STATION	204715N 1064149E E-18
AN LAI I/P STATION	204853N 1061920E E-9
VAN TRI I/P STATION	204808N 1062419E E-11
YEN NHAN I/P STATION	204914N 1062400E E-11
HAI PHONG TRANSFORMER SUBSTA KHUC GIAN	204940N 1063338E D-48
DON NGHIA I/P STATION	204955N 1064054E E-18
LUONG XAM I/P STATION	204951N 1064422E E-18
XAM BO I/P STATION	204957N 1064419E E-18
PHONG LAM I/P STATION	205018N 1061939E E-10
AN DUONG I/P STATION	205056N 1063945E E-18
KIEU SON (2) I/P STATION	205032N 1064328E E-18
KIEU SON (1) I/P STATION	205038N 1064353E E-18
TRUNG DAO I/P STATION	205145N 1060209E E-11
DONG MY I/P STATION	205139N 1060412E E-9
HAI PHONG DIESEL-ELECTRIC PPLT AUX 3 (PROB)	205132N 1064037E C-8
HAI PHONG CEMENT PLANT TRANS SUBSTATION	205147N 1064018E D-22
HAI PHONG THERMAL POWERPLANT WEST	205150N 1064020E A-10
HAI PHONG DIESEL-ELECTRIC PPLT AUX 1 (PROB)	205132N 1064137E C-22
HAI PHONG DIESEL-ELECTRIC PPLT AUX 2 (PROB)	205131N 1064239E C-26
DOAN XA I/P STATION	205118N 1064313E E-18
BINH DI I/P STATION	205240N 1062209E E-9
TRIEU LONG I/P STATION	205256N 1062646E E-11
QUYNH HOANG I/P STATION	205226N 1063636E E-18
HAI PHONG TRANSFORMER SUBSTATION	205206N 1063912E D-14
HAI PHONG THERMAL POWERPLANT EAST	205210N 1064250E A-12
HOA XUYEN I/P STATION	205325N 1060236E E-10
THACH LOI I/P STATION	205326N 1061148E E-12
DUONG PHU I/P STATION	205350N 1063230E E-18
HA NHUAN I/P STATION	205357N 1063241E E-18
DO NHA I/P STATION	205330N 1063605E E-18
DU NGHIA, SOUTH I/P STATION	205433N 1063348E E-18
DU NGHIA, NORTH I/P STATION	205436N 1063348E E-18
NGOC LO I/P STATION	205518N 1062357E E-10
VIEN CHU I/P STATION	205512N 1063133E E-18
PHI XA, SOUTH I/P STATION	205512N 1063256E E-18
PHI XA, NORTH I/P STATION	205519N 1063255E E-18
KIM SON I/P STATION	205545N 1063332E E-18
YEN XA I/P STATION	205605N 1060236E E-11
HAO THON I/P STATION	205605N 1060237E E-9
HAI DUONG TRANSFORMER SUBSTATION	205638N 1061510E D-44
CO CHAM I/P STATION	205650N 1062548E E-9
XUAN DAI I/P STATION	205750N 1061713E E-12
AN THAI TRANSFORMER SUBSTATION	205710N 1063037E D-32
LUONG XA, SOUTH I/P STATION	205707N 1063117E E-18

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LUONG XA, NORTH I/P STATION  
 HAI PHONG TRANSFORMER SUBSTATION TRANG KINH  
 HAI DUONG TRANSFORMER SUBSTA THANH LIEN  
 CU PHAM I/P STATION  
 AN LANG I/P STATION  
 PHU XUYEN I/P STATION  
 PHUONG KHE I/P STATION  
 DAO CAT BA THERMAL POWERPLANT (PROBABLE)  
 HON GAI THERMAL POWERPLANT  
 PHUONG BANG I/P STATION  
 HA NOI TRANSFORMER SUBSTATION SONG DONG  
 HA NOI THERMAL POWERPLANT  
 HA NOI TRANSFORMER SUBSTA NGOC LAM  
 NONG VU DUNG, NORTH I/P STATION  
 NONG VU DUNG, SOUTH I/P STATION  
 SONG GIAN I/P STATION  
 NGHAI THON I/P STATION  
 SONG DAY DAM I/P STATION  
 CAI NGOI I/P STATION  
 NHAI TAN I/P STATION  
 XUAN TRACH I/P STATION  
 GIA THUONG I/P STATION  
 HANGI/THUONG CAI I/P STATION  
 THANH AM SUSPECT DIESEL-ELECTRIC POWERPLANT  
 THUONG THON I/P STATION (2)  
 DUNG NGAC I/P STATION (1)  
 DUNG NGAC I/P STATION (2)  
 LOCHA SOUTH I-P STATION  
 LOCHA NORTH I/P STATION  
 TRAI MA GANG I/P STATION  
 TRUNG THON I/P STATION  
 THUONG THON I/P STATION (1)  
 VONG LA I/P STATION  
 PHUONG TRACH I/P STATION  
 VAN THUONG SOUTH I/P STATION  
 VAN THUONG NORTH I/P STATION  
 DUC TU I/P STATION  
 XOM SANG I/P STATION  
 HAI MUN TRAI I/P STATION  
 TIEN TAN I/P STATION  
 NGHIA LA I/P STATION  
 NGUYEN XA I/P STATION  
 LE XUYEN I/P STATION  
 TAM SON I/P STATION  
 HA NOI TRANSFORMER SUBSTATION DONG ANH  
 CAM CAO I/P STATION  
 PHU SA I/P STATION  
 CHAU PHAN I/P STATION  
 NAN TRI, WEST I/P STATION  
 NAN TRI, EAST I/P STATION

205717N 1063122E E-18  
 205748N 1064600E D-76  
 205845N 1062504E D-52  
 205815N 1062712E E-9  
 205839N 1063219E E-18  
 205934N 1062308E E-10  
 205900N 1062840E E-10  
 204320N 1070325E A-24  
 205628N 1070705E A-16  
 210104N 1054150E E-15  
 210256N 1054127E D-100  
 210235N 1055051E A-14  
 210242N 1055223E D-62  
 210211N 1055636E E-15  
 210200N 1055634E E-15  
 210320N 1052932E E-15  
 210321N 1053429E E-14  
 210454N 1053804E E-15  
 210403N 1054030E E-14  
 210434N 1054433E E-15  
 210420N 1055139E E-16  
 210403N 1055246E F-14  
 210406N 1055202E E-14  
 210410N 1055446E C-14  
 210439N 1055534E E-15  
 210512N 1054627E E-14  
 210516N 1054628E E-16  
 210540N 1055316E E-14  
 210543N 1055314E E-14  
 210608N 1053302E E-15  
 210641N 1054332E E-15  
 210643N 1054333E E-15  
 210602N 1054700E E-16  
 210657N 1054905E E-15  
 210608N 1055153E E-16  
 210615N 1055138E E-16  
 210639N 1055352E E-14  
 210739N 1050741E E-16  
 210750N 1053643E E-14  
 210728N 1054115E F-15  
 210740N 1055046E E-14  
 210709N 1055611E F-16, 36  
 210758N 1055807E E-14  
 210837N 1052656E E-15  
 210825N 1055044E D-16  
 210915N 1052635E E-14  
 210910N 1053059E E-15  
 210931N 1053918E E-14  
 210926N 1054806E F-14  
 210931N 1054834E E-14

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TANG MY I/P STATION	210951N 1054810E E-16,40
THU THON I/P STATION	210940N 1055720E E-15
NGOC BAI I/P STATION	211021N 1053548E E-14
NGUYEN KHE WEST I/P STATION	211033N 1055104E E-15
NGUYEN KHE EAST I/P STATION	211036N 1055106E E-14
PHU XA DOAI I/P STATION	211111N 1054811E E-15,32
VAN LOI I/P STATION	211218N 1054238E E-16
THACH LOI I/P STATION	211249N 1054621E E-15
XUAN DUONG I/P STATION	211216N 1055325E E-16,27
TRAC BUT I/P STATION	211246N 1055655E E-15
NINH BAC I/P STATION	211355N 1054709E E-15
NGUYET CAU I/P STATION	211326N 1055608E E-16
XUAN TAO I/P STATION	211411N 1055439E E-16
TIEN TAO I/P STATION	211445N 1055511E E-15
DONG CUONG I/P STATION	211554N 1053428E E-14
THIEN HUONG I/P STATION	211530N 1053941E E-15
THINH KY I/P STATION	211518N 1054128E E-15
LANG TRUOC DIESEL-ELECTRIC POWERPLANT	211523N 1055214E C-10
TRINH XA I/P STATION	211625N 1052053E E-16
CAM HOANG I/P STATION	211637N 1055531E E-14
XOM VIET I/P STATION	211743N 1052714E E-16,38
VIET TRI THERMAL POWERPLANT	211800N 1052520E A-34
HANH CANH I/P STATION	211928N 1055221E E-14
PHU THO SUSPECT TRANSFORMER SUBSTATION	212338N 1051324E D-66
VINH PHU I/P STATION	212330N 1053223E E-16
XOM NAM I/P STATION	212643N 1055657E E-16
PHU THO THERMAL POWERPLANT (POSS)	212905N 1050600E A-36
THAI NGUYEN TRANSFORMER SUBSTA (STEEL PLANT)	213319N 1055236E D-24
NA CHEIM I/P STATION	213433N 1055745E E-14
THAI NGUYEN TRANSFORMER SUBSTATION ORE PLANT	213515N 1055735E D-96
THAI NGUYEN/LANG DANH I/P STATION	213626N 1054904E E-15
THAI NGUYEN I/P STATION	213626N 1054909E E-15
THAI NGUYEN THERMAL POWERPLANT	213645N 1054908E A-28
THAI NGUYEN SUSPECT SWITCHING SUBSTATION	213700N 1054901E D-72
THAI NGUYEN TRANSFORMER SUBSTATION CO LOUNG	213909N 1054305E D-38
LANG CHI HYDRO POWERPLANT THAC BA (U/C)	214447N 1050137E B-8
NHAT TRAI I/P STATION	210036N 1061655E E-15
QUAN SON I/P STATION	210012N 1061855E E-15
YEN DIEN I/P STATION	210021N 1062420E E-16
DONG QUAN BEN I/P STATION	210009N 1062508E E-14
UONG BI I/P STATION	210145N 1064720E E-20
THAP DUONG I/P STATION	210219N 1061744E E-15
UONG BI THERMAL POWERPLANT	210210N 1064728E A-32
VU XA I/P STATION	210300N 1062905E E-16
PHU MY I/P STATION	210410N 1060238E E-16
MAO KHE TRANSFORMER SUBSTATION	210418N 1063712E D-56
VANG DANH I/P STATION	210450N 1064745E E-20
TRUNG THON SA I/P STATION	210553N 1062128E E-15
HUU LOC I/P STATION	210558N 1062105E E-14
DUONG MONG I/P STATION	210713N 1060104E E-14

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PHA LAI I/P STATION  
VANG DANH DIESEL-ELECTRIC POWERPLANT NORTH  
VANG DANH SUSPECT DIESEL-ELECTRIC POWERPLANT  
VANG DANH TRANSFORMER SUBSTATION  
VANG DANH I/P STATION (1)  
BAC NINH TRANSFORMER SUBSTA PHUC HAU  
KHAC NIEM THUNG I/P STATION  
HIEN LUONG I/P STATION  
THACH THON I/P STATION  
YEN TAP CAO I/P STATION  
BAC NINH TRANSFORMER SUBSTATION  
THONG THIEN HA I/P STATION  
CHUC IAY I/P STATION  
GIA SON I/P STATION  
HUU NGHI I/P STATION  
NHUONG THON I/P STATION  
DONG LOAN I/P STATION  
VU GIAN I/P STATION  
GIANG THOU (3) I/P STATION  
GIANG THOU (2) I/P STATION  
GIANG THOU (1) I/P STATION  
PHU TAI I/P STATION  
YEN KHE I/P STATION  
CUA NGOI, SOUTH I/P STATION  
CUA NGOI, NORTH I/P STATION  
TRUOC THON I/P STATION  
NHU THIET I/P STATION  
THON LO I/P STATION  
BAC GIANG, SOUTH I/P STATION  
BAC GIANG THERMAL POWERPLANT  
BAC GIANG, NORTH I/P STATION  
PHUC MAN I/P STATION  
KEP TRANSFORMER SUBSTATION  
BO HA TRANSFORMER SUBSTATION  
KEP I/P STATION  
BO HA THERMAL POWERPLANT  
NA CAP I/P STATION  
KHON CUOI I/P STATION  
NHU NGAO I/P STATION  
LANG SON TRANSFORMER SUBSTATION  
PO MO I/P STATION  
PHIA DEU I/P STATION  
CAM PHA RECTIFIER SUBSTATION  
CAM PHA DIESEL-ELECTRIC POWERPLANT  
CAM PHA TRANSFORMER SUBSTATION DINH CU  
CAM PHA PORT TRANSFORMER SUBSTATION  
MONG DUONG I/P STATION  
CAM PHA TRANSFORMER SUBSTATION MONG DUONG  
LO THANG I/P STATION  
LAO CAI THERMAL POWERPLANT

210702N 1061752E E-15  
210745N 1064615E C-6  
210718N 1064815E C-16  
210718N 1064816E D-26  
210752N 1064815E E-20,31  
210824N 1060120E D-64  
210920N 1060425E E-14  
210903N 1061257E E-14  
210941N 1061548E E-15  
211058N 1061208E E-16  
211136N 1060304E D-30  
211237N 1060737E E-15  
211258N 1060833E E-14,30  
211257N 1065134E E-14  
211306N 1060454E E-14  
211330N 1061542E E-15  
211337N 1061621E E-14  
211410N 1061315E E-16  
211440N 1061440E E-14  
211440N 1061441E E-14  
211447N 1061421E E-14  
211524N 1060116E E-15  
211542N 1061112E E-16  
211553N 1061134E E-14  
211555N 1061136E E-14  
211515N 1061247E E-15  
211626N 1060813E E-15  
211658N 1060951E E-15  
211800N 1061210E E-14  
211808N 1061220E A-4  
211828N 1061204E E-14,26  
211839N 1061205E E-22  
212248N 1061630E D-46  
212633N 1061155E D-34  
212621N 1061958E E-16,41  
212757N 1061326E A-18  
214030N 1061440E E-22  
214033N 1063635E E-20  
214854N 1065011E E-20  
215057N 1064513E D-102  
215035N 1064625E E-20  
215050N 1064647E E-20  
210012N 1071908E D-10  
210110N 1071830E C-4  
210100N 1071955E D-40  
210126N 1072230E D-36  
210318N 1072028E E-2  
210333N 1072018E D-18  
222823N 1035819E E-2  
222931N 1035829E A-20

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NA TANH I/P STATION  
NA VAI I/P STATION  
BAN LO I/P STATION  
CAO BANG HYDRO POWERPLANT  
AN NINH I/P STATION  
HA QUANG, WEST I/P STATION  
HA QUANG, EAST I/P STATION

224040N 1061225E E-22  
224045N 1061221E E-22  
224121N 1061410E E-22  
224105N 1061652E B-6  
224505N 1060748E E-22  
224505N 1060755E E-22  
224510N 1060759E E-22

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